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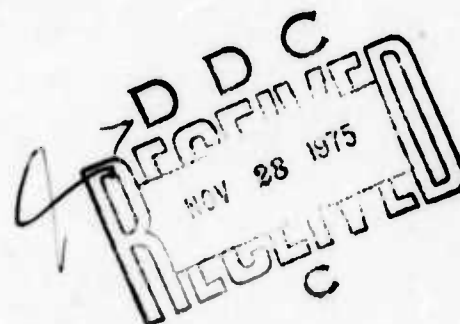
INSTRUCTION FOR UNIT TRAINERS IN HOW TO CONDUCT PERFORMANCE TRAINING

William C. Osborn, J. Patrick Ford,
Harold L. Moon, and Roy C. Campbell
Human Resources Research Organization

and

Robert T. Root and Larry E. Word
Army Research Institute for the Behavioral and Social Sciences

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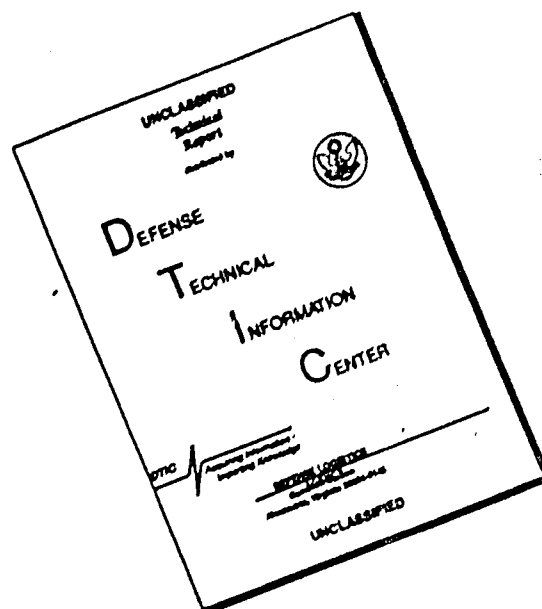
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J. E. UHLANER
Technical Director

W. C. MAUS
COL, GS
Commander

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William C. Osborn, J. Patrick Ford,
Harold L. Moon, and Roy C. Campbell
Human Resources Research Organization

and

Robert T. Root and Larry E. Word
Army Research Institute for the Behavioral and Social Sciences

Submitted by:
Frank J. Harris, Chief
Unit Training and Evaluation Systems Technical Area

September 1975

Approved by:

Joseph Zeidner, Director
Organizations and Systems
Research Laboratory

J. E. Uhlaner, Technical Director
U.S. Army Research Institute for
the Behavioral and Social Sciences

FOREWORD

This publication is a product of a broad research program on unit training and unit performance assessment being conducted by the Unit Training and Evaluation Systems Technical Area of the Army Research Institute for the Behavioral and Social Sciences (ARI). The need for improvement in training in units was brought out by the report of the Board for Dynamic Training (Gorman Board) in 1971. In 1972, ARI formally established a mission and provided resources to conduct research on unit training and evaluation.

This course outline is part of the final report on Project UTRAIN, Research on Methods of Enhancing the Training Capability of Unit Training Personnel. It presents a detailed outline of the UTRAIN instructional block, intended to be used to prepare officers and NCO's to manage and conduct performance-oriented instruction in their own units. A second volume, in publication as an ARI Research Report, discusses the entire research project: a study of unit trainer needs, the development of training to meet part of those needs, and implementation of the training in the Infantry Officer Basic Course at Fort Benning, Georgia.

ARI research in this area is conducted as an in-house effort augmented by contracts with organizations selected as having unique capabilities and facilities in training research. The work reported here was done jointly by personnel of the Human Resources Research Organization (HumRRO), Fort Knox, Kentucky, under Contract No. DAHC 19-73-C-0035, and ARI. The research was conducted under RDTE Project 2Q063101A733, FY 1973 Work Program, and is responsive to requirements of the Combat Arms Training Board (CATB) of the U.S. Army Training and Doctrine Command (TRADOC).



J. E. UHLANER,
Technical Director

COURSE OUTLINE: INSTRUCTION FOR UNIT TRAINERS IN HOW TO CONDUCT
PERFORMANCE TRAINING

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INTRODUCTION

REQUIREMENT

On 30 June 1971, the Army Chief of Staff directed that responsibility for training be decentralized to the battalion and company levels. At that time, training resources and doctrine were oriented toward a school rather than a unit environment: Typically, such training had been organized around subject matter, governed by time requirements, and delivered by lecture.

There was concern that the changes in training responsibility and doctrine would not fully benefit units unless unit training personnel were skilled in managing and conducting performance-oriented training. The problem was to develop a course to prepare officers and NCO's to manage and conduct performance-oriented training in units.

PROBLEM DEFINITION

Answers to four questions defined the problem of developing an experimental program of instruction for unit training personnel:

- (1) For which target group should the program be developed?
- (2) Which aspect of training should be emphasized--training management (TM) or methods of instruction (MOI)?
- (3) Where should the training be given--in a school or as unit OJT?
- (4) What will be the constraints on program design?

The answer to the first question was sought through a survey of field units. The second question was addressed by analyzing course materials on TM and MOI in various Army service schools.

The third question was answered in discussions between research personnel and CATB representatives. It was decided that a service school would be the preferred location for the training. In discussion with representatives of the Infantry School (as the proponent US Army Training and Doctrine Command (TRADOC) school for training instruction), it was finally agreed that the course should initially be aimed at officers in the Infantry Officer Basic Course (IOBC) and should address only the conduct of training.

UTRAIN COURSE

A draft course outline was prepared based on 10 hours of available time. The first three hours are devoted to presenting the principles and techniques of performance-oriented training; the remaining time is devoted to practical exercise presentations.

Four developmental trials of the course were conducted--two at the Armor School and two at the Infantry School. The course was revised after the first three trials. The trial presentations gave an opportunity to verify the suitability of the practical exercise tasks and to evaluate the draft videotapes used as training aids in support of the course. The scripts for the videotapes were revised after the second presentation. The final versions were produced at the Infantry School. The final trial presentation, at the Infantry School, demonstrated that the course was ready for implementation.

EVALUATION

Informal evaluations of the UTRAIN course were conducted throughout its development. Participant and observer reactions provided a continuing basis for course revision. But once it had reached its final form, the course was subjected to more formal evaluation:

Trial presentations of UTRAIN at Fort Benning were observed by Infantry School representatives responsible for determining whether the course should be implemented. The fact that they recommended implementing UTRAIN in IOBC indicated that their opinion was favorable.

A questionnaire administered to 197 students in the first IOBC class to complete UTRAIN indicated that most students considered the material presented in the first three hours meaningful, and nearly all thought it was presented effectively. A large majority of the students rated the full 10-hour block as effective in preparing them to conduct effective performance-oriented training.

The effectiveness of eight instructors who had completed the UTRAIN course with two practical exercise presentations (16 hours) was compared with the effectiveness of eight instructors who had completed an 80-hour conference-oriented MOI course that included a 16-hour block on performance training. The non-UTRAIN group had had significantly more experience in both time in service and experience as instructors.

The results, which tended to favor the non-UTRAIN instructors, were attributed to two possible factors: (a) training in conference techniques may transfer better than expected for delivering training on soft-skill tasks, or (b) the additional military experience of the non-UTRAIN instructors in dealing with AIT-level soldiers may simply have had a substantial effect.

UTILIZATION OF UTRAIN

In January 1975, the Infantry School obtained TRADOC approval to implement UTRAIN in the IOBC curriculum. Subsequently, the Infantry School, as the proponent school for training instruction, distributed UTRAIN materials to all TRADOC service schools.

Awareness of UTRAIN among Army officials during the developmental testing phase generated interest in other applications of the course. Assistance was requested to adapt the course for various situations. As a result of that assistance, some forms of the UTRAIN course appear valuable in four additional environments:

- (1) As part of the curriculum for NCO courses.
- (2) As an instructor training course for the faculty of schools and training facilities.
- (3) As instructor training for Reserve/National Guard trainers
- (4) To prepare instructors to conduct specialized element training

Experience in those four situations demonstrated the adaptability of UTRAIN. However, that experience also indicated that three characteristics should never be changed no matter what the application:

- (1) There should be maximum student participation when presenting the principles and techniques of performance-oriented training.
- (2) Practical exercise tasks should be similar to those tasks soldiers will encounter on the job.
- (3) Practical exercise tasks should be unfamiliar to soldiers acting as students.

COURSE OUTLINE

Lesson Plan

PERFORMANCE TRAINING

METHOD OF INSTRUCTION

Conference, Demonstration, Coaching, Practical Exercise

INSTRUCTOR REFERENCES

Annex A
Annex B
Annex H

INSTRUCTOR MATERIALS

Piece of string, 10" long
Two sheets of unlined paper, 20 lb., 6-1/2"x8"

STUDENT REFERENCES

None

STUDENT MATERIALS

Annex C
Annex D
Annex E
Annex F
Annex G
Ten pieces of string, 10" long
Forty sheets of unlined paper, 20 lb., 6-1/2"x8"

TRAINING AIDS

Chalkboard
TV/Videotape system (one TV set)
Videotape player
Videotapes of scenarios in Annex I

PERSONNEL REQUIREMENT

Instructor

CLASSROOM REQUIREMENT

Classroom to accommodate ten students with chalkboard and TV/
Videotape system

STUDENT EQUIPMENT

As required by Practice-Instruction Tasks - Annex G

ADVANCE ARRANGEMENTS

Ready materials, equipment, and TV/Videotape system
Arrange for equipment and materials as required by Practice-
Instruction Tasks - Annex G

STUDENT PERFORMANCE OBJECTIVE

Given a lesson plan, performance test, and necessary equipment
for training an assigned military task, the soldier will train
six students to master the assigned task.

TIME REQUIREMENT

Elapsed time: 10 hours (ten 50-minute periods)

INSTRUCTIONAL SECTIONS

- I. Introduction
- II. Orientation to Training Procedures
- III. Principles and Demonstration of Performance Training
- IV. Demonstration of How to Demonstrate
- V. Demonstration of Performance Training Phases
- VI. Performance Testing
- VII. Practice in Performance Testing and Review of Performance-
Instruction Process
- VIII. Practical Exercise (Preparation to Instruct)
- IX. Practical Exercise (Practice Instruction)
- X. Final Critique

CLASS PERIODS

1. Sections I, II and III
2. Section IV and Section V
3. Section VI and Section VII
4. Section VIII
5. Section VIII
6. Section IX
7. Section IX
8. Section IX
9. Section IX
10. Section IX and Section X

SECTION I - INTRODUCTION
(3 minutes)

A. Attention

1. As desired by instructor.

B. Motivation

1. As a platoon leader, one of your major responsibilities is to be sure that your men are able to perform as professional soldiers. You must see to it that they can actually do what they must do at the appropriate time. An important aid to discharge this responsibility is for you to be skilled in performance training.

C. Objectives

1. When you complete this unit of training you will be able to apply the basic principles of performance training to preparing, delivering, and evaluating a brief block of instruction. Specifically, given a lesson plan, performance test, and necessary equipment for training an assigned military task, you will train six students to master the assigned task.

SECTION II - ORIENTATION TO TRAINING PROCEDURE
(5 minutes)

A. Introduction

1. To help you become a skilled performance trainer, we will follow this procedure:

B. Procedure

1. First, we will discuss the six basic principles of performance training. These principles are listed on advance sheet number one.
2. After we discuss the principles of performance training, we will show you a videotape of three training incidents.
3. We will discuss the videotape and identify which principles of performance training were applied, and which were violated.
4. Then we will discuss the principles of an effective demonstration. I will demonstrate the importance of the principles by teaching you a simple task.
5. Next we will discuss the phases of performance training and the principles of coaching a student in learning a task. I will demonstrate these phases by teaching you another simple task.
6. You will also learn the procedure to administer performance tests reliably.
7. Finally, we'll summarize the principles and phases by showing you a videotape of an instructor training four soldiers to perform a military task. You will watch the demonstration and critique the instructor on an instructor checklist.
8. The most important part of learning to give performance training will be your application of the principles you will learn. Each of you will do this by teaching six of your classmates a task. You will have two hours to prepare for this practical exercise.
9. While each of you is instructing six classmates, the rest will be observing and rating the student instructor on his performance.
10. Any questions?

SECTION III - PRINCIPLES AND DEMONSTRATION OF PERFORMANCE TRAINING (42 minutes)

A. Introduction

1. Now we will discuss the six principles of performance instruction. They are listed on this sheet. (Hand out principles.)

B. Principles of Performance Instruction

1. Present only the information the student must know to perform the task adequately and safely.

- a. This means that you must tell the student only what he must do and how to do it adequately and safely.
- b. Conversely, it also means that you must eliminate extraneous or "nice-to-know" information, such as historical background, technical information that has nothing to do with the task, and "war stories" and other anecdotes. Such information does not help the student learn -- it just wastes valuable time.

2. Present the essential "how to" information only when the student needs it for task performance, a step at a time.

- a. This means that you must avoid showing and explaining how to perform a task before he has a chance to use the information. The reason for avoiding this is that the student won't remember your instructions, and you must give it all to him again when he has a chance to perform. This wastes much time.
- b. This principle is often violated when an instructor gives "how to" information during a conference session before a student needs it to perform in a practical exercise situation.

3. Require the student to apply the "how to" information immediately in "hands on" task performance.

- a. This means that the student must do what you do as soon as possible after you demonstrate and explain how to perform a step, and you must see that he does it, not just watch and listen.
- b. This gets the student to learn by doing, which is the best way to learn a task. Remember to require him to learn to DO, not learn to talk about doing.

c. Requiring the student to apply the information in "hands on" performance puts an important responsibility on the trainer. That responsibility is to establish situations during practice periods that will cause the student to learn how to perform a task. Here, there is one important thing to watch for. What you prepare for the student to do as a practical exercise will depend primarily on the type of job task he is to learn. In many cases the practical exercise situation will be straightforward as you will be working with a task in which the conditions, procedure and outcome never vary. The student will repeatedly work with the same information, practice the same procedure and attempt to achieve the same outcome each practice trial. "For example, in disassembling the M16 rifle, or performing artificial respiration, or placing the field telephone in operation, or disarming the Claymore mine -- the information given the student as well as the procedure and outcome of the task do not change. In these cases you will simply have the student practice the procedure until he can do it correctly. In other cases the basic procedure in performing a task will not change, but certain given conditions or information govern the outcome of task performance. In determining the coordinates of a point on a map, for example, the outcome (a six-digit coordinate) will vary depending on the designated point on the map. Obviously, here you would not have the student drill over and over on the coordinates for the same point on the map. Rather, you would give him a different map location for each practice trial so that he practices applying the procedure over a range of problems. Another example of this would be sending a radio message where the student would have to be given a series of different messages during practice in order to use, for

instance, different letters of the phonetic alphabet or other elements that may vary from one radio message to another. So, when you are preparing the practice session for your students, be sure to consider the type of task they are to learn -- is it the type they must practice under different conditions or with different information given, or must they simply practice the procedure under the same conditions and with the same information each time.

4. Permit each student to learn each step and develop his skill at his own pace.

- a. For various reasons, individuals learn at various rates, and they learn best at their own pace.
- b. This principle also allows a student to practice as little or as much as he needs to develop a skill.
- c. Fast learners can be tested (checked out) while slower learners are still developing their skill. Fast learners can then be assigned to help the slower learners who need help. This can make your job as an instructor much easier and speed up the training. One note of caution: if you do use peer instructors, be sure they apply the principles of performance training and demonstrating that this course covers.

5. Aid student learning by coaching them.

- a. Coaching involves four things:
 - (1) Telling and/or showing a student as many times as necessary for him to learn something difficult.
 - (2) Prompting student recall of what to do next, or of how to do something, by asking questions.
 - (3) Preventing a student from doing something wrong. It is better to prevent an error, if possible, than to have a student correct it, especially if the error would cause personal injury or equipment damage.

(4) Reinforcing correct performance by assuring the student that he is doing something correctly. When you tell a student he is doing it right, he is encouraged to try harder and he learns faster. Unfortunately, many instructors either fail to give positive reinforcement or fail to give it as often as they should.

b. One thing should be remembered about coaching: the student is the one who should be practicing, not you. If you show a student how to do a step in a task, return the equipment to its previous condition so the student can do that part of the task.

6. Establish quality control by reliably administering performance tests which require the absolute GO/NO-GO (Pass/Fail) criterion.

a. During this course we will talk about the process of performance training. You will rate each other on the things you do and on the things you fail to do as an instructor. But the effectiveness of training should not be determined just by observing the procedure an instructor follows. You know training is effective if the students are able to perform the task to the level specified by the training objective. Performance tests are the tools to help you determine whether the students have mastered the objective.

b. Later today we will discuss the general procedure to follow when administering performance tests. Now we want to emphasize the importance of performance test results for trainers in a unit. If a student makes an error or takes more time than allowed, he is a "NO-GO" and must get remedial training, or more skill practice, or both before he is tested again. The "GO/NO-GO" criterion simply means that every man must be able to do his job as defined by the training objective with 100 percent accuracy before he is fully qualified to be a member of your unit.

C. Videotape Demonstration of Performance Training

1. As you watch the demonstration of performance training on TV, keep these principles in mind and note those that are applied, those that are not demonstrated and those that are violated. Keep notes so we can discuss the results. Let's go over the principles quickly again.

(Read the principles without comment.)

Do you have any questions?

(Roll videotape of Annex I, Part I. Demonstration of Performance Training.)

D. Discussion (After each segment of tape)

1. Which principle or principles were violated? When did this happen?

2. Which principles were demonstrated? When did this happen?

3. Which principles were not demonstrated? When could they have been demonstrated?

SECTION IV - DEMONSTRATION OF HOW TO DEMONSTRATE
(20 minutes)

A. Introduction

1. Now that you have a fairly clear grasp of the six performance training principles, we will now further demonstrate their application and at the same time present the principles of effective demonstration. (Pass out one piece of string to each student.) We will all work with these pieces of string.

2. The training objective for this demonstration is that you will be able to form a knot around your left forefinger so that it looks like this. (Show completed knot on your left finger.) Of course you can probably do this in various easy ways, but we are going to follow a fixed procedure that has enough steps for demonstrating how to give a demonstration.

3. I will first demonstrate from one position, while you follow me, and then from another position, while you follow, to see if there is any difference in the way you can learn.

B. Demonstration - Not From Students' Viewpoint and Without Explanation

1. (Stand facing the students -- and demonstrate slowly how to form the knot on your left forefinger. Do NOT explain any step.)

2. I will demonstrate each step slowly while you watch. Then I will do it again slowly while you do what I do.

(On the second run-through, require all students to attempt performance. Most will very soon become hopelessly confused. Stop then, and ask questions.)

3. What am I doing wrong? (Someone may say, "You're doing it backward," or "We can't see it as you see it," or the like, meaning: DEMONSTRATE FROM THE STUDENTS' VIEWPOINT.) (Put that principle on the chalkboard.)

4. What else didn't I do that I should have done? (If you get no response ask, "Did I explain how to do any step? No." (Put on chalkboard: CAREFULLY EXPLAIN EACH STEP AS YOU DEMONSTRATE. Be sure to leave space on the board between the principles.)

C. Demonstration From Students' Viewpoint and With Explanation

1. (Turn your back to the students -- and slowly demonstrate and carefully explain each step and emphasize each critical (key) point.)

Now I'll demonstrate from your viewpoint and explain each step. As I show and explain, you do as I do and you can learn the procedure rather easily. Be sure to ask questions if you do not understand. Before we finish, you will all be able to perform this task.

2. (Demonstrate and explain two or three times or until most students can perform correctly, then individually coach the slower learners. As each performs correctly, tell him, "You are a 'GO'.")

3. Did you notice anything in particular that I seemed to emphasize? (If students fail to respond, point out that you emphasized critical (key) points -- things they must do to perform the task correctly and easily -- and illustrate with several instances.)

This is another principle of effective demonstration. (Put on chalkboard: EMPHASIZE KEY POINTS.)

4. There is another principle we should note at this point: What did I ask you to do as I showed and explained the task? (A student may say, "We tried to do it," or the like.) That is a very important principle because the student starts to learn immediately by doing. (Write on chalkboard: REQUIRE STUDENTS TO PERFORM AS YOU DEMONSTRATE AND EXPLAIN.)

5. You should also be aware of three other principles of effective demonstration. Could you clearly see what I was doing? (The answer should be "Yes." Put on the chalkboard under "Demonstrate From the Students' Viewpoint": BE SURE THE STUDENTS CAN CLEARLY SEE YOUR DEMONSTRATION.)

Could you hear my explanation? (The answer should be "Yes." Put on the chalkboard under "Carefully explain each step as you demonstrate": BE SURE THE STUDENTS CAN HEAR YOU.)

Did I use words you could easily understand? (The answer should be "Yes." Put on the chalkboard under "Be sure the students can hear you": USE WORDS THE STUDENTS CAN UNDERSTAND.)

SECTION V - PHASES OF PERFORMANCE TRAINING (30 minutes)

A. Introduction

1. Up to now we have emphasized the six basic principles of performance training and the seven principles of effective demonstration.

2. The purposes of the task you will learn now are to re-emphasize the principles we have discussed and to demonstrate the phases of performance training -- demonstration, task walk-through, individual practice, and performance test.

3. During the demonstration and your learning, note the application of as many principles as you can -- the principles of performance training and of effective demonstration.

4. When all of you have learned the task, we will discuss what happened in relation to the principles we have established.

5. The training objective for the task we have chosen for demonstration is that you will be able to form a small box from a piece of paper within two minutes. This task has the minimal complexity needed for achieving the purpose of this instructional segment, and beyond that you may find it useful in entertaining children or perhaps even adults.

B. Demonstration

1. (Give a piece of paper (6-1/2"x8") to each student.)
2. (Show students what the paper looks like from their point of view after each fold.)
3. (Demonstrate and explain as effectively as you can at a pace suited to your students until you complete the box.)
4. (Stress care and neatness in folding the paper so that the completed box will have good form.)

C. Walk-Through

1. (Explain that you have completed the demonstration and that the next phase is the walk-through which means that the students will perform each step when you tell them to without your help, unless they need it.)
2. (Coach students who need help until all have completed the box.)
 - a. (If possible, prevent students from making errors.)
 - b. (Praise students when they perform correctly -- positive reinforcement.)

D. Individual Practice

1. (Explain that the walk-through phase is completed and that the next phase is individual practice.)
2. (Give each student another piece of paper.)
3. (Explain that they are to form the box at their own pace, and to ask questions or ask for help, if they need it. Remind them that the time limit for the test is two minutes.)
4. (Explain that when anyone needs help, you will give it or you may assign one or more students as peer coaches.)
5. (Assign fast learners who complete the task to help slower learners, if they need it.)

E. Performance Test

1. (Hand out paper.)
2. You will now be tested on your ability to form a box from a sheet of paper. You have two minutes. Are there any questions? All right, begin.
3. (Stop students at the end of two minutes.)
4. (Identify "GO" and "NO-GO" students.)

F. Review of Process

1. Even though folding a box is a simple task, we just covered each phase that will usually be included in performance training.
2. What was the first phase? (Demonstration)
3. What do we call the process when you made the box while I told you when to perform each step without demonstrating it? (The Walk-Through)
4. What was the phase after the walk-through? (Individual Practice)

5. What is the difference between the demonstration, walk-through, and individual practice phases? (Discussion of this point should emphasize that the process is designed to wean students from prompts until they are able to perform the task as specified by the training objective without any job irrelevant cues.)

6. Usually, good performance training will include four obvious phases -- demonstration, walk-through, individual practice, and performance test. There will be some occasions, however, when you will want to vary the process. If a task is easy to learn or the students are especially fast, you can probably skip the walk-through or individual practice phases. Still, you should plan to include all phases when you prepare to instruct.

SECTION VI - PERFORMANCE TESTING (20 minutes)

A. Characteristics of Performance Tests

1. The tasks soldiers perform in their MOSs are well documented, and performance tests are based on these job requirements. A good performance test, therefore, determines whether a soldier is able to perform a skill required of him on the job.

2. You may never be required to prepare performance tests, but you surely will be required to administer them, so the purpose of this section is to help you understand their characteristics and administer them reliably.

3. (Pass out the Sample Performance Test.)

4. We will use this sample BCT test to point out the characteristics of performance tests.

5. There are two major characteristics of performance tests. They specify the testing conditions and the task-performance standard.

a. Testing conditions are the circumstances under which each student must be tested. These circumstances include the precise student instructions, the testing location, and the necessary equipment and/or materials for each student, and the condition of the equipment.

- (1) In the sample test, are there precise student instructions? Which heading are they under? (Test Situation: TESTER WILL READ TO TRAINEE.)
- (2) Is a testing location given? Which heading is it under? (Test Condition.) What is the location? (Indoors or outdoors.)
- (3) Are equipment and materials specified? Under which heading? (Necessary Equipment.)
- (4) Is a condition of the equipment specified? Under which heading? (Test Condition.)
- (5) Note that in the performance test format adopted by the Army for Basic Combat Training, all the elements of testing conditions we mentioned are there but under three different headings.

b. Task-performance standard -- the second characteristic of a test -- includes the amount of work to be done, the quality of the work, and the time limitation, if any.

- (1) Is the performance standard given in the sample test? Under which heading? (Test Standard.)
- (2) What is the amount of work to be done? (All steps.) How do you know? (No step can be omitted.)
- (3) What quality of work is required? (Correct accomplishment of each step.)
- (4) What is the time limitation? (Three minutes.)
- (5) What are the scoring criteria? (If any step is omitted, the trainee is "NO-GO.") If the trainee does not perform a step correctly, is he a "NO-GO?" (Yes, "The trainee must correctly accomplish each step.") Must the steps be performed in the order listed? (No, Performance Measures 2 or 3 can be reversed without penalty.) If he does everything right but takes more than three minutes, is he a "NO-GO?" (Yes.)

- (6) If the student meets the performance standard, he is "GO"; if not, he is "NO-GO." As said earlier, this absolute criterion (Pass or Fail) is extremely important. If a student cannot meet a minimum (job-entry) standard, he is simply not qualified for the job -- he can either perform to standard or he cannot, and if he cannot, he is not yet a qualified member of a unit.

B. Administering Performance Tests

1. For a test to be a good measuring instrument it must be reliably administered.

2. Reliable test administration depends partly on the test -- it must permit OBJECTIVE administration. When a performance test specifies the testing conditions and the performance standard, it can be administered objectively -- you can see that the testing conditions are met, see that no step is omitted, see that each step is performed correctly, and see that the time limit (if any) is met.

3. Reliable test administration also depends on those who administer it -- in this case, each of you. This means that you must be sure that everything is the same for each student you test.

4. To give a test properly, do this:

- a. Be sure the equipment and materials are set up or arranged as specified in the test and are in the required testing location.
- b. Always read the instructions to each student in the same way and in the same tone of voice. Be sure each student understands the instructions.
- c. Be sure your demeanor -- posture, facial expression, and attitude -- is the same for each student.
- d. Score each student on all items in the test. Do not assume that a student who does a few steps right can do all steps right.

- e. Do not give any student the benefit of a doubt. Do not assume that a student who leaves out a step during the test will remember it on the job.
- f. If the student makes an error during the test, do not correct him. Also, do not tell him when he does something right.
- g. If the student scores "NO-GO" on the test, explain what he did wrong and how to do it right.
- h. Follow procedures prescribed for your unit for giving remedial training to "NO-GO" students.

SECTION VII - REVIEW OF PERFORMANCE TRAINING PROCESS (30 minutes)

A. Introduction

1. Since you must be able to administer performance tests reliably, you need practice in observing behavior and in rating that behavior in accordance with a performance checklist.
2. During this period you will get initial practice in scoring the checklist we have prepared for rating the performance of instructors, by rating the performance of an instructor, teaching men to disassemble and assemble a caliber .45 pistol.
3. Later, when you are performing as instructors, you will get ample practice in scoring the checklist as you rate the performance of your colleagues.
4. (Give Checklist for Critique of UTRAIN Practical Exercises to students.)
5. To assure that each of you understands how to score the items, we will review the checklist.

B. Test Review

1. (Have students read the checklist. Explain any item they do not understand. The items noted below may require explanation.)

a. In DEMONSTRATION section:

- Item 6. "Gave all information necessary for performance of each step." (Both showing and explaining information.)
- Item 7. "Required student to perform each step immediately after showing and explaining it." (Did not show and explain two or more steps before requiring student to perform.)
- Item 8. "Emphasized critical (key) points." (Clearly called attention to each key point and stressed it by explaining why it must be done.)
- Item 9. "Avoided giving unnecessary information." (Anything not necessary for adequate and safe task performance; does not include necessary orientation to the task -- what the student will learn to do -- or why it must be performed.)
- Item 10. "Paced demonstration in accordance with the student's learning ability." (Did not demonstrate too fast for the student to understand the information, or did not demonstrate so slowly that the student was bored, impatient, or exasperated.)

b. In WALK-THROUGH section:

- Item 4. "When coaching, always required the student to perform all steps or parts of steps he demonstrated." (When some instructors help a student by showing how to do something, they tell the student to go on from there, rather than undoing what they did and having the student also do it.)

c. In INDIVIDUAL PRACTICE section:

- Item 4. "If task result varies with conditions, gave student practice situations that differed from each other and from demonstration and walk-through situations." (If task result varies with conditions, students should practice with different conditions.)

d. In PERFORMANCE TEST section:

- Item 2. "Observed complete performance of students being tested." (Did not assume mastery from first few steps.)
- Item 4. "Arranged testing conditions so students could not copy each other." (If feedback from each other is not relevant to job, gave students different conditions, or arranged them so they could not see each other, or tested students individually.)

e. General:

- Item 7. "Reinforced correct student performance." (Not ego massage. Rather, letting students know they are doing task correctly.)
- Item 8. "Avoided giving students unnecessary help." (Help that students did not need which tended to slow them down or become too dependent on the instructor.)

C. Instruction (Cal .45 Pistol)

- 1. (Show videotape of instruction of disassembly and assembly of cal .45 pistol.) (Annex I, Part II. Demonstration for Performance Testing.)
- 2. (After videotape, discuss ratings of instructor performance. If ratings differ, clarify areas of misunderstanding. Encourage students to discuss strengths as well as weaknesses in instruction.)

SECTION VIII - PRACTICAL EXERCISE (PREPARATION TO INSTRUCT)
(2 hours)

A. Introduction

- 1. Now that you are aware of the principles and techniques of performance instruction, you must prepare as an instructor and then practice.
- 2. (Give students the Instructor Guide.)

3. This Instructor Guide contains in brief form the process of performance training and performance testing which you have observed so far. In addition, it gives the processes for review and refresher training which you will need when you are assigned a unit.

4. You will use this guide in preparing to give instruction in following sessions.

5. To be sure you understand it, let's go through it and answer your questions.

B. Review of Instructor Guide

1. (Have students read guide silently. Answer any questions.)

C. Assign Tasks

1. We have selected ten brief military tasks for use in practicing performance training.

2. Each of you will be assigned one of these tasks and be given the basic information and the equipment or materials you will need (to include the lesson plan and performance test).

3. Given these materials and information, you will have two hours to prepare for teaching the task.

4. I will be available to assist you in your preparation if you need it.

5. At (give time) your practice instruction will begin.

6. Each task you will teach has a number from one to ten. If you have task number one, you will be the first to instruct.

7. You will have about 30 minutes to instruct, so two of you will give instruction during a class period.

8. Six of your colleagues will be your students. They will respond to your demonstration, practice and be checked out by you on the proficiency test.

9. As you teach the six students, the other three in the group and I will observe and listen, and evaluate you on your behavior.

10. After each presentation, the evaluators will critique your performance.

11. (Assign instructional tasks to students.)

12. As you prepare for your instruction, do this:

- a. Perform the task yourself until you thoroughly understand what is involved.
- b. As you perform, carefully note critical (key) points to emphasize.
- c. Practice demonstrating the task to an imaginary student until you feel well prepared and confident.

D. Student Preparation for Instruction

1. (Disperse students to make room for their set-ups and their work.)
2. (Be available to give assistance when it is needed.)
3. (Occasionally circulate among the students to show them you are interested in their work.)

SECTION IX - PRACTICAL EXERCISE (PRACTICE INSTRUCTION)

- A. (Give each student three copies of the critique checklist.)
- B. (If necessary, assist students with set-ups, but do it their way, not as you would do it. In other words, do not give them instruction on how to make the best set-up. This is part of the exercise.)
- C. (Designate the six students and three raters -- each man should be an instructor once, a student six times, and a rater three times.)
- D. (Tell each when to start instructing and when to stop.)

E. (After each presentation, review the evaluations made by the raters. Encourage raters to discuss not only "NO-GOs," but also outstanding parts of each presentation and possible alternate approaches to the instruction.

F. Conclusion (after all students have presented instruction)

1. This unit of training has given you the ability to:

.Demonstrate a task to your soldiers.

.Conduct a practice period so your men can learn a task.

.Administer performance tests.

2. The instruction during this unit has focused on conducting performance training of tasks done by one person. Later, in your units you will have to conduct collective training. Collective training is training a group of men to perform tasks that require them to interact with each other, for example, attacking as a squad. You will also conduct situational training. Situational training is training men in an environment that is as close as possible to their job environment, for example, training a squad to attack in a simulated battlefield.

3. Regardless of the type of training you conduct in your unit, the basic skills of performance training you have developed in this course will apply. These basic skills will make it possible for you to guarantee that the soldiers in your unit will be able to perform their jobs.

ANNEXES

Annex A

FORMING A KNOT WITH A PIECE OF STRING

Material: A piece of string about 10 inches long.

Procedure: Read each step and its critical points before performing the step.

- Step 1. Position hands with their backs upward; with the full hand, grasp the piece of string near each end so that about four inches of string extend from one hand to the other.
- Step 2. Extend thumb and forefinger of each hand with the string between them.
- Step 3. Hold the string taut and rotate each hand so that the thumb and forefinger of each is pointing toward the other.
- Step 4. Grasp the string with the thumb and forefinger of each hand so that the string is held between the first joints of the thumb and the second joints of the forefingers.

Critical Point: The first joint of each forefinger must extend beyond the end of the thumb.

- Step 5. Hold the left hand steady and wrap the string one turn and a half around the first joint of the left forefinger. Do this by holding the string taut by the right hand and rotating the right hand clockwise around the first joint of the left forefinger.

Critical Point: When the turn of the string is completed, the portion of string that completes the turn must cross over the portion of string that starts the turn. The direction of the crossover must be toward the back of the left hand.

- Step 6. With the end of the thumb of the left hand, hold the loop of string at the point where the string crosses. Do not relax this holding pressure.

- Step 7. Hold the right hand steady and wrap the string one turn and a half around the first joint of the right forefinger. Do this by holding the string taut by the left hand and rotating the left hand counterclockwise around the first joint of the right forefinger.

Critical Point: When the turn is completed, the portion of string that completes the turn must cross over the portion of string that starts the turn. The direction of the crossover must be toward the back of the right hand.

- Step 8. With the end of the thumb of the right hand, hold the loop of string at the point where the string crosses.

Critical Point: Carefully note the direction of the string crossover of each loop on each forefinger, and carefully maintain the directions of crossover during Steps 9 and 11.

- Step 9. Release pressure of the right thumb, and with the right thumb and forefinger, loosen the string loop on the downward side of the left forefinger and slip the loop off and continue to hold it with the right thumb and forefinger.

Critical Point: The downward side of the forefinger is opposite the point where the string crosses on the forefinger.

Critical Point: During this step, continue to grip the ends of the string in both hands.

Critical Point: Maintain the crossover of the loop on the right forefinger.

Critical Point: As you pull the loop off from the underside of the forefinger, maintain the crossover of that loop.

Critical Point: Continue to hold the loop with the right thumb and forefinger exactly as you pulled it off the left forefinger. Do not release your grip and grasp the loop at another place.

Critical Point: Continue to hold the ends in the hands -- do not drop either end of the string.

- Step 10. While holding the left loop with the thumb and forefinger of the right hand, move the forefinger of the left hand from below the loop to over the loop, and insert the forefinger through the loop; then hold the left loop on the forefinger with the left thumb.

Critical Point: The left forefinger must be inserted through the loop from the above position. In other words, insert the forefinger through the loop immediately after you move it above the loop.

- Step 11. Relax left thumb hold on the left loop, and with the left thumb and forefinger pull the loop off the backside of the right forefinger, and insert the left forefinger directly through the loop.

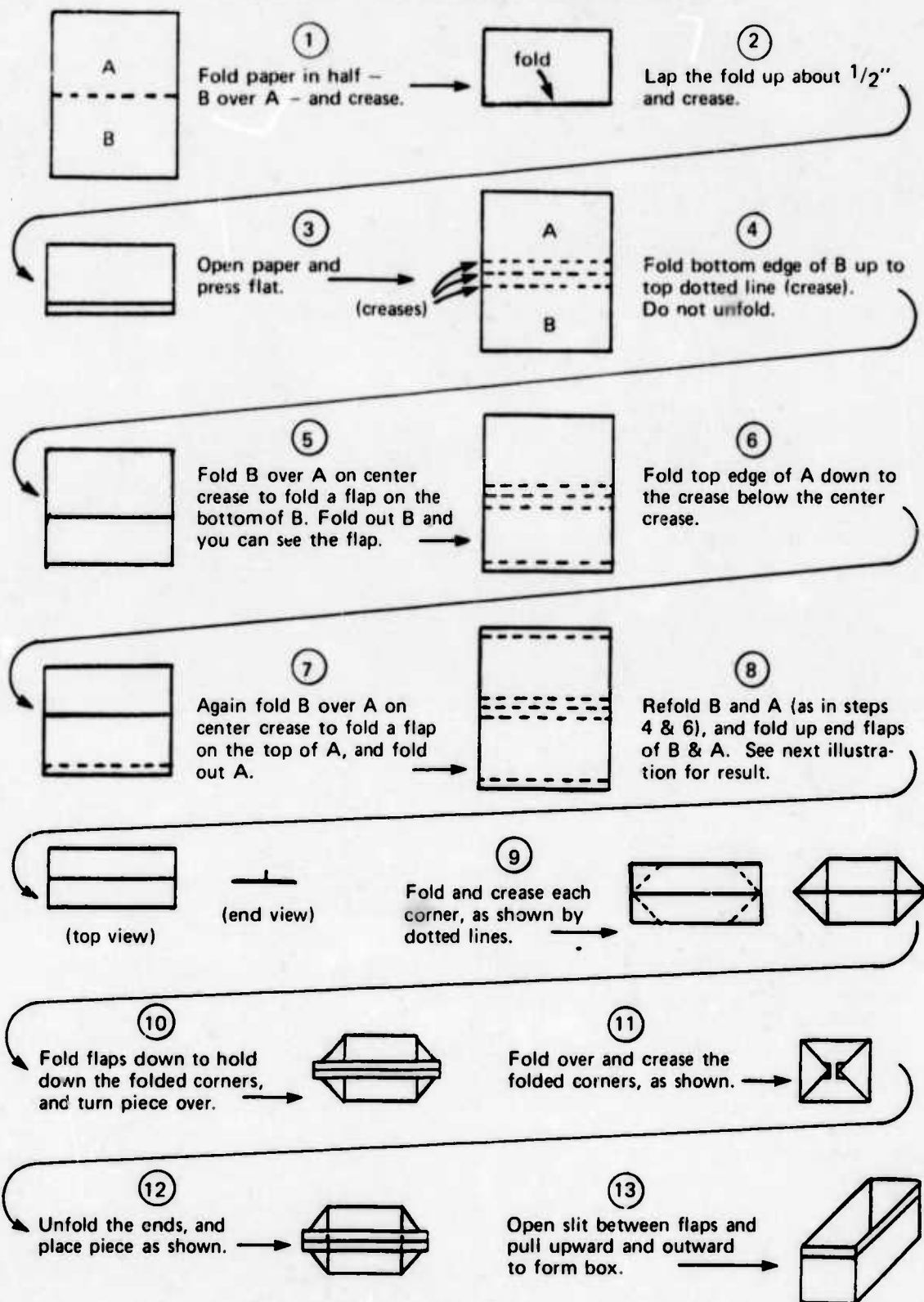
Critical Point: Be sure to grasp only that portion of string looped around the right forefinger on the backside of the right forefinger.

Critical Point: When you pull the loop off the right forefinger and swing it toward you, the loop is in the correct position for direct insertion of the left forefinger.

Step 12. Release the ends of the string and carefully pull the ends to form a knot on the left forefinger.

Annex B

PROCEDURE FOR MAKING A PAPER BOX



Annex C

PRINCIPLES OF PERFORMANCE INSTRUCTION

1. Present only the information students must know to perform the tasks adequately and safely.

NOTES:

2. Present the necessary "how to" information only when students need it for task performance.

NOTES:

3. Require students to apply the "how to" information immediately in "hands on" task performance.

NOTES:

4. Permit each student to learn each step and develop his skill at his own pace.

NOTES:

5. Aid students' learning by coaching them.

NOTES:

6. Establish quality control by administering performance tests reliably.

NOTES:

Annex D

SAMPLE BCT PERFORMANCE TEST

"PERFORMANCE TEST 1: PLACING THE TELEPHONE,
TA-1, INTO OPERATION"

Test Situation
(TESTER WILL READ TO TRAINEE)

"At this station you must place the Telephone Set, TA-1, into operation and conduct a communication check. You will have 3 minutes."

Test Condition:

Indoors or outdoors. Telephone will be properly stowed.

Necessary Equipment:

Telephone Set, TA-1/PT. TL-13A wire pliers. WD-1/TT field wire.

Performance Measure 1:

REMOVE FROM CASE.

Open the case and remove the telephone.

Performance Measure 2:

CONNECT WIRE.

A. Strip approximately one inch of insulation from the field wire.

B. Connect the field wire to the binding posts.

Performance Measure 3:

ADJUST BUZZER

Turn the buzzer control knob to the LOUD position.

Performance Measure 4:

COMMUNICATION CHECK

A. Depress the generator lever to signal the other station.

B. When the signal is answered by tester, depress the PUSH-TO-TALK switch and talk.

.....

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Test Standard

The trainee must correctly accomplish each step. If any step is omitted or is incorrectly performed, the trainee will be a "NO-GO" on this test. The trainee's sequencing of Performance Measures 2 and 3 will not be graded but no step may be omitted. Performance Measure 4; however, is the final step in the sequence.

Annex E
INSTRUCTOR PROFICIENCY CHECKLIST

Instructor _____ Task _____

Maximum Time _____ Par Time _____

Number of Students _____

Students Who Reach Mastery _____

Total Time _____

NOTES

CHECKLIST FOR CRITIQUE OF UTRAIN PRACTICAL EXERCISES

CHECKPOINTS	GO	NO GO	N/A	COMMENTS
<u>Demonstration</u>				
1. Told students the training objective.				
2. Gave a reason for learning the skill.				
3. Demonstrated from students' viewpoint.				
4. Demonstrated in location that allowed students to see well.				
5. Demonstrated each step in the task.				
6. Gave all information necessary for performance of each step.				
7. Required students to perform each step immediately after showing and explaining it.				
8. Emphasized critical (key) points.				
9. Avoided giving unnecessary information.				
10. Paced demonstration in accord with the students' learning ability.				
<u>Walk-Through</u>				
1. Prevented students from making errors.				

CHECKPOINTS	GO	NO GO	N/A	COMMENTS
<u>Walk-Through (Cont'd)</u>				
2. <u>Told</u> students what to do when they needed that kind of help.				
3. <u>Showed</u> students what to do when they needed that kind of help.				
4. When coaching, always required students to perform all steps or parts of steps he demonstrated.				
<u>Individual Practice</u>				
1. Told students when they were ready for skill practice.				
2. Prompted students when necessary by asking questions, "How do you do (such and such)?" "What must you do now?" or the like.				
3. Asked students "smoke-out" questions to be sure they understood critical (key) points, "Why do you do that?" "What would happen if..." or the like.				
4. If task result varies with conditions, gave students practice situations that differed from each other and from demonstration and walk-through situations.				

CHECKPOINTS	GO	NO GO	N/A	COMMENTS
<u>Performance Test</u>				
1. Read instructions clearly and slowly to students to be tested.				
2. Observed complete performance of students being tested.				
3. Avoided correcting errors of students being tested until test was finished.				
4. Arranged testing conditions so students could not copy each other.				
5. Explained error for each "NO GO" item.				
6. If any student received a "NO GO", assigned him to an assistant or peer instructor for remedial training.				
<u>General</u>				
1. Spoke so students could hear well.				
2. Used understandable words.				
3. Encouraged student questions.				
4. Always answered relevant questions.				
5. Always deferred irrelevant questions.				
6. Was patient with students.				

CHECKPOINTS	GO	NO GO	N/A	COMMENTS
<u>General (Cont'd)</u>				
7. Reinforced correct student performance by saying, "Good", "That's right", "Fine", or the like.				
8. Avoided giving students unnecessary help.				

Annex F
STUDENT INSTRUCTOR GUIDE

Prepare for demonstration of the tank.

Obtain the performance test. You must have the performance test to adequately check student performance after training.

Check the objective carefully. This is exactly what your trainees must do.

Insure you can perform the task.

The test may be in the Army Subject Schedule, in a technical or field manual, or the company training officer's file.

Identify all acts and key (critical) points in performance of the task.

Perform the task and pay careful attention to everything you do, regardless of how small an act may be, and ask yourself why you do everything you do. This will enable you to explain it to your men.

Note all possibilities for injury of self or others and how to avoid them.

Note all possibilities for damage to equipment or materials and how to avoid them.

Note all acts that must be done in sequence for task performance.

Note all specific acts that must be done at certain points to make the task easier.

Note all conditions of equipment or materials at certain points to make the task easier.

Prepare the set-up for demonstration so that all students can clearly see and hear you.

Position equipment and/or materials so students can see the demonstration as they will when they are performing the task.

Assure that students are placed so they can see you.

If available, use training aids to show relationships of parts or difficult steps in a procedure, such as exploded views or overlay transparencies.

When appropriate, provide students with job aids, such as procedural checklists, troubleshooting routines, or manuals.

Orient students to the equipment and/or materials and to the task.

Briefly identify the equipment and/or materials and state their purpose, if necessary. Do NOT give "nice-to-know" information, such as historical background, technical characteristics, or HOW it does what it does.

Precisely state the training objective.

Tell trainees exactly what they must be able to do upon the completion of training on that task.

Explain why they must accurately perform the task within the specified time limit. Give the military reason to motivate them to learn. Do not waste time with "war-stories" or anecdotes.

Demonstrate and explain the task to be learned.

Emphasize that the students must perform the task as you will demonstrate it to them.

Show and explain one step at a time in accordance with the performance test.

Identify for the students the part or parts you will work with or on in each step.

Speak loudly enough to be heard.

Speak to be understood; that is, speak deliberately and use non-technical terms.

Strongly emphasize each key (critical) point you have noted in your analysis of the task. Don't just mention them; emphatically call attention to them.

Explain why a step must be performed in a particular way -- to prevent personal injury or equipment damage, or to avoid unnecessary difficulty in performing the step.

Make what you do clearly visible from the students' viewpoint.

The "student's viewpoint" is (or very nearly) the direction in which the student will see his hands and what he will work with or on when performing the task.

If precisely what you do must be hidden from view, carefully show what you will be working on and carefully explain how you will perform so that their mental imagery can give them some idea of the precise action. If the task is a soft skill task and you are doing something mentally, insure you explain how and why you are doing it. (You may have to coach the students on such acts during the walk-through phase.)

After demonstrating and explaining each step, ask for and answer relevant questions, but defer irrelevant questions.

When students ask questions relevant to performance of a step, answer them by carefully showing and explaining again what they want to know.

If the questioning student is a slow learner and continues to query after his peers understand a step, politely tell him you will show him how to do it during the walk-through.

If a student asks a question irrelevant to performance of a step, tell him to ask you again during the break period. Such questions usually are asked by technically oriented students who want "nice-to-know" information.

Always resist temptation to give extraneous information during instruction. Instructional time is precious. Concentrate on giving only essential information.

Pace your showing and explaining to the learning ability of your students.

For various reasons, students learn at different rates.

You can judge the appropriateness of your pace by observing your students during the demonstration.

Ask questions to see that students understand.

Be sure that students understand each step and perform it (though clumsily) before you proceed to the next step.

When appropriate, demonstrate alternate procedures for performing a task under different conditions.

An example is a modified procedure for performing a task at night, rather than in daytime.

Alternate procedures, if much different, should be taught after students have mastered the basic (usual) procedure.

Conduct the walk-through phase. (If task is simple, this phase may not be needed. If the task is difficult, several repetitions may be necessary.)

Pace the walk-through by telling the students when to perform each step.

Explain how to perform the step and observe student performance.

Coach those students who have difficulty.

Reinforce correct performance by saying, "That's right," "Good," "Fine," or the like.

Supervise practice.

Require students to perform without your telling them when and how to perform each step, unless individuals need help.

Coach students who need help.

They may need only prompting to recall what to do and how to do it.

If you see a student about to do something wrong, stop him and coach him through the step. It is better to prevent a mistake than to correct it.

If you must demonstrate a step, be sure to require the student to perform it, not just go on to the next step.

Reinforce correct performance by letting students know they are doing well.

Qualify, assign and supervise peer (assistant) instructors.

If the task is relatively simple, you will recognize fast learners whom you can assign as peer instructors to aid one or more slower learners.

If task is difficult or dangerous, qualify the fast learners by asking them "smoke out" questions about key points to be sure they understand: "Why do you do that?" "What would happen if...?" "How can you be sure that...?"

If students are in small groups, the first one to walk through probably can qualify as the assistant.

You must observe peer instructors to be sure that they are prompting and coaching correctly.

When students have learned the task procedure, instruct them to practice to develop skill and speed.

Remind students of the performance standard and time limitation of task performance.

Instruct students to let you know when he thinks he is ready for check-out (testing) on the skill.

Administer performance tests.

Make the equipment set-up or arrangement of supplies the same for each student.

Give the same test instructions in the same way to each student.

Score each student -- "GO" or "NO-GO"-- on the same points.

Require of all students complete performance of the tasks. Do not assume from previous observation that a student can perform certain steps well without testing.

If a student scores "GO" on all points, tell him he is a "GO" and tell him what to do next.

If a student scores "NO-GO" on any point, tell him he is a "NO-GO" and what he did wrong, and explain (and show, if necessary) how to do it correctly.

If time permits, require "NO-GO" students to continue practice until they score "GO" on all points.

If time does not permit further practice for "NO-GO" students, arrange for their further practice.

Annex G
PRACTICE-INSTRUCTION TASKS

I. Tasks and Manuals

<u>Task</u>	<u>Manual</u>
Demonstrate left-side parachute landing fall	TM 57-220
Determine charge for mortar round	FM 23-91
Determine charge to cut steel I-beam	FM 5-25
Fold map sheet for use during an extended patrol*	FM 21-26
Fold U.S. Flag*	FM 22-5
Give dismounted arm and hand signals*	FM 21-60
Give mounted arm and hand signals*	TM 21-306
Issue initial fire commands for tank	FM 17-12
Measure resistance with a multimeter*	TM 11-6625-366-15
Perform ready positions of riot baton manual of arms*	FM 19-15
Prepare a written message on a message form	FM 21-75
Splice field wire with expedient splice	FM 24-20
Tie basic bowline, bowline on a loop, and three-loop bowline	FM 31-72
Tie rappel seat*	FM 31-72
Transmit location element of call for fire	FM 6-40

*Tasks that can probably be taught in less than 15 minutes.

Annex G

PRACTICE-INSTRUCTION TASKS

II. Lesson Plans

LESSON PLAN

Demonstrate Left Side Parachute Landing Fall

A. TRAINING OBJECTIVE

TASK: Each soldier will demonstrate the left side parachute landing fall.

CONDITIONS: Given a two-foot platform with a sand or sawdust landing pit (outdoors) or a two-foot platform with a landing mat (indoors).

TRAINING STANDARD:

- (1) Soldier must land on balls of feet with knees bent slightly and feet together.
- (2) Upon contact with pit or mat, soldier must lower chin to chest, bring hands in front of head with elbows in front of chest, and bend and twist torso to the right.
- (3) Soldier must roll to left without hesitating on balls of feet.
- (4) Left calf, left thigh, left buttock, and fleshy muscles in left side of back must contact pit or mat in sequence.
- (5) Tension in neck must be maintained throughout fall.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Three two-foot platforms, landing pits, or mats.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate or have assistant demonstrate parachute landing fall.	3 min
3.	Conduct walk-through by having students demonstrate fall individually.	4 min
4.	Conduct practice session by having all students practice the fall. Circulate among the students and critique their performance.	4 min
5.	Test students individually.	2 min
6.	Remediate and retest any student who is a NO-GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

1. Insure that practice area has enough room for students to practice individually without rolling into each other.

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Determine Charge for Mortar Round

A. TRAINING OBJECTIVE

TASK: Each soldier will determine the charge for three mortar rounds.

CONDITIONS: As a soldier in a fire direction center, given a graphical firing scale 4.2-H-1, a table of corrections, and a statement of location of three targets and mortars, including range to target, altitude of target, and altitude of mortar (one target will be at the same altitude as mortar, one will be higher than mortar, and one will be lower).

TRAINING STANDARD: Final charge for each situation will be accurate $\pm 1/8$. Soldier will have five minutes to compute the three charges.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Seven graphical firing scales 4.2-H-1, seven tables of corrections, 20 worksheets.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate procedure to compute charge for target at same altitude as mortar.	1 min
3.	Demonstrate procedure to compute charge for target at lower altitude than mortar.	2 min

SEQUENCE	ACTIVITY	TIME*
4.	Demonstrate procedure to compute charge for target at higher altitude than mortar.	1 min
5.	Walk through computing charge for targets at same altitude, higher, and lower than mortar.	3 min
6.	Pair students and have them develop problems for each other to solve.	4 min
7.	Test students collectively, using attached performance test.	3 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Determine Charge to Cut Steel I-Beam

A. TRAINING OBJECTIVE

TASK: Each soldier will determine the charge required to sever a steel I-beam.

CONDITIONS: Given an I-beam silhouette, ruler and a demolition table.

TRAINING STANDARD:

- (1) Charge must be determined within two minutes.
- (2) Charges to cut flange and web with dimensions of silhouette must be extracted from the demolition table.
- (3) Flange charge must be doubled and added to web charge.
- (4) Charge must be rounded to the highest whole number.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Seven demolition tables, 12 I-beam silhouettes, seven rulers.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate procedure for computing the demolition charge. Have students perform the steps with you, using the same size silhouettes. Check student answers.	3 min

SEQUENCE	ACTIVITY	TIME*
3.	Distribute different sized silhouettes and have students perform walk-through. Observe student procedure and check results.	3 min 3 min
4.	Redistribute silhouettes and conduct practice session until students are ready to be tested.	3 min
5.	Test students collectively, using attached performance test.	3 min
6.	Remediate and retest any student who is a NO-GO.	2 min <u>15 min</u>

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Fold Map Sheet for Use During an Extended Patrol

A. TRAINING OBJECTIVE

TASK: Each soldier will fold a map so it can be easily carried and referenced on an extended patrol.

CONDITIONS: Given a standard map sheet and a razor blade, knife or scissors.

TRAINING STANDARD: Map must be folded so 1/16 of total area of map is exposed and any 1/16 section can be referred to without refolding entire map within two minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: 25-30 map sheets, seven razor blades, knives or pairs of scissors.

D. SEQUENCE	ACTIVITY	TIME*
1.	State the training objective and reason for learning the task.	1 min
2.	Demonstrate the steps in folding the map sheet. Have students perform the steps with you.	3 min
3.	Conduct walk-through by having students perform steps on command. Observe students.	4 min
4.	Conduct practice session until students are ready to be tested.	4 min

SEQUENCE	ACTIVITY	TIME*
5.	Test students collectively, using the attached performance test.	2 min
6.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Fold the U.S. Flag

A. TRAINING OBJECTIVE

TASK: Each soldier will fold the U.S. Flag.

CONDITIONS: Given a U.S. Flag and an assistant at the blue field edge to help as soldier requests.

TRAINING STANDARD: Flag must be folded so that entire length of flag is folded into a triangle with only the blue field showing and margin tucked into pocket formed by folds at blue field edge of the flag. Flag must be folded correctly in one attempt within three minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Four U.S. Flags.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate folding of the flag, using the assistant instructor. Have students work in pairs, performing the steps with you.	3 min
3.	Conduct walk-through by having students switch positions and folding the flag on command. Observe students and critique as necessary. Have each student go through the walk-through as the folder.	4 min

SEQUENCE	ACTIVITY	TIME*
4.	Conduct practice session until students feel they are ready to be tested.	3 min
5.	Test students individually, using the assistant instructor. Students not being tested should not be allowed to observe the tested student.	3 min
6.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Give Dismounted Arm and Hand Signals

A. TRAINING OBJECTIVE

TASK: Each soldier will give dismounted arm and hand signals for Assemble, Line Formation, Attention, Move Out, As You Were, Double Time, Quick Time, Column Right, Column Left, and Halt.

Conditions: Given two situations that require directing the movement of a squad of infantry with dismounted arm and hand signals.

TRAINING STANDARD:

- (1) Signal for Assemble must be given from the position of Attention by raising one arm vertically overhead, palm to the front and waving the arm in large horizontal circles.
- (2) Signal for Line Formation must be given from the position of Attention by raising both arms to the horizontal and extending arms and hands, keeping the palms of the hands facing down.
- (3) Signal for Attention must be given from the position of Attention by extending one arm to the horizontal with the palm to the front and waving the arms to and from the head several times, bending the arm at the elbow.
- (4) Signal for Move Out must be given from the position of Attention by facing the desired direction of movement and extending the arm to the rear, palm up and bringing the arm forward over the head until it is horizontal to the front with the palm facing down.
- (5) Signal for As You Were must be given from the position of Attention by raising both arms over the head and crossing them at the wrist with the palms to the front.
- (6) Signal for Double Time must be given from the position of Attention by raising the closed fist of one hand to the same shoulder and rapidly extending the arm upwards to its full length and back to the shoulder several times.
- (7) Signal for Quick Time must be given from the position of Attention by extending one arm to the side horizontally with the palm to the front and waving the arm downward from the horizontal several times, keeping the elbow straight.
- (8) Signal for Column Right must be given from the position of Attention with the back to the troops by extending the right arm to the side horizontally with the palm to the front.

- (9) Signal for Column Left must be given from the position of Attention with the back to the troops by extending the left arm to the side horizontally with the palm to the front.
- (10) Signal for Halt must be given from the position of Attention with the hand raised over the head to the full extent of the arm with the palm to the front.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: None

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate the ten arm and hand signals, identifying each. Insure students perform each along with you.	4 min
3.	Conduct walk-through by having students perform each signal on command. Observe student performance.	3 min.
4.	Conduct practice session until students are ready to be tested. Students may practice in pairs under overall instructor supervision.	3 min
5.	Test students individually or collectively, using the attached performance test. If students are tested collectively, have them stand in a circle facing outward so they cannot observe each other during test.	3 min

SEQUENCE	ACTIVITY	TIME*
6.	Remediate and retest any student who is a NO GO.	1 min <hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Give Mounted Arm and Hand Signals

A. TRAINING OBJECTIVE

TASK: Each soldier will give mounted arm and hand signals for Right Turn, Open Up, Wedge Formation, Close Up, Line Formation, and Echelon Right.

CONDITIONS: Given two situations that require directing the movement of a platoon of tanks with mounted arm and hand signals.

TRAINING STANDARD:

- (1) Signal for Right Turn must be given with back to "vehicles" by extending right arm upward at 45° angle with index finger extended and rest of right hand in a fist.
- (2) Signal for Open Up must be given by extending both arms vertically with fingers touching and palms to the rear, then lowering arms to horizontal with palms down.
- (3) Signal for Wedge Formation must be given by holding both arms overhead, bent at elbows, fingers together, and palms touching.
- (4) Signal for Close Up must be given by extending both arms horizontally (palms up), then raising arms to vertical with fingers touching and palms to the rear.
- (5) Signal for Line Formation must be given by extending both arms to horizontal with palms down.
- (6) Signal for Echelon Right must be given by extending right arm upward at 45° angle and left arm downward at 45° angle (both palms to front).

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: None.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate the 5 arm and hand signals, identifying each. Insure students perform each along with you.	4 min
3.	Conduct walk-through by having students perform each signal on command. Observe student performance.	3 min
4.	Conduct practice session until students are ready to be tested. Students may practice in pairs under overall instructor supervision.	3 min
5.	Test students individually or collectively using the attached performance test. If students are tested collectively, have them stand in a circle facing outward so they cannot observe each other during test.	3 min
6.	Remediate and retest any student who is a NO GO.	1 min <hr/> 15 min

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E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Issue Initial Fire Commands for Tank

A. TRAINING OBJECTIVE

TASK: Each soldier will issue fire commands for engaging a tracked vehicle, a wheeled vehicle, and a personnel target.

CONDITIONS: Given three visuals of three targets (tracked vehicle, wheeled vehicle, and personnel) with range to target indicated on the visuals, each visual shown for 10 seconds.

TRAINING STANDARD:

- (1) Fire command for tracked vehicle target must be "Gunner, HEAT, Tank, Fire."
- (2) Fire command for wheeled vehicle target must be "Gunner, COAX, Truck, Fire."
- (3) Fire command for personnel target must be "Gunner, HEP, Troops, Range (stated in even hundreds or digit-by-digit), Fire."
- (4) Soldier must wait for tester to announce "Up" and "Identified" before he (soldier) announces "Fire."

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: 15 visuals of tracked vehicle, wheeled vehicle, and personnel targets.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	State the elements of a fire command, and give a complete sample fire command for a tracked vehicle, a wheeled vehicle, and a personnel target.	3 min
3.	Conduct walk-through demonstration by having each student give a fire command. Show him a visual of a target and prompt him by telling which element he should give next.	4 min
4.	Pair students and have one show visuals while the other gives the fire command.	4 min
5.	Test students individually or collectively, using the attached performance test. If verbal response is tested, test must be administered so that students cannot overhear each other.	2 min
6.	Remediate and retest any student who is a NO GO.	2 min
		<hr/> 15 min

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E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Measure Resistance with a Multimeter

A. TRAINING OBJECTIVE

TASK: Each soldier will zero adjust the multimeter and measure resistance with the multimeter.

CONDITIONS: Given a multimeter TS-352B/U with batteries installed, function switch on DC CURRENT, range switch at RX100, and leads not plugged in, and a color-coded resistor.

TRAINING STANDARD:

- (1) Multimeter must be set up by turning FUNCTION switch to OHMS, plugging black lead into OHMS-DC+AC jack and red lead into OHMS jack, and setting range switch on RX1000.
- (2) Multimeter must be zero adjusted by connecting test prods to resistor, turning range switch until meter pointer stops close to midscale, touching prods together, and turning OHMS ZERO ADJ knob until meter pointer appears directly over the 0 on right hand of the OHMS scale.
- (3) Resistance of resistor must be measured by connecting test prods across resistor, reading meter indication on OHMS scale, and multiplying reading by factor indicated on range switch.
- (4) Final resistance must be accurate within 10 percent.
- (5) Final resistance must be measured within two minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: 20 color-coded resistors, seven multimeters TS-352B/U, and seven color code scales.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate each step to zero adjust the multimeter, and measure resistance, insuring that students perform each step with you.	3 min
3.	Conduct walk-through by having students perform each step on order. Observe and critique students' performance.	4 min
4.	Conduct practice session by giving students different resistors.	4 min
5.	Test students collectively, using the attached performance test.	2 min
6.	Remediate and retest any student who is NO-GO.	1 min
		<u>15 min</u>

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E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Perform Ready Positions of Riot Baton Manual of Arms

A. TRAINING OBJECTIVE

TASK: Each soldier will assume PARADE REST, PORT ARMS, and ON GUARD positions.

CONDITIONS: Given a riot baton and commands for PARADE REST, PORT ARMS, and ON GUARD.

TRAINING STANDARD:

- (1) In PARADE REST position, feet must be placed shoulder width apart and baton must be held 6 inches from each end with left palm facing out and right palm facing in.
- (2) In PORT ARMS position, feet must be placed shoulder width apart and baton must be held 8 inches from the body so that right hand and forearm are parallel to the ground, left hand is level with the left shoulder, and striking ends of baton bisects the angle between the neck and left shoulder.
- (3) In ON GUARD position, left foot must be in front of right foot with feet spread and knees slightly bent. One end of baton must be held snugly against hip with left arm bent sufficiently to provide for a thrust. Body must be bent slightly forward at the waist.
- (4) Transition from positions must be brisk and sharp.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Seven riot batons or facsimiles of riot batons.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	2 min
2.	Demonstrate each of the three manual-of-arms position, insuring that the students perform each along with you.	3 min
3.	Conduct initial practice session by having students perform movements on command. Critique each student on each position.	3 min
4.	Continue practice session until students feel they are ready to be tested.	3 min
5.	Test students in ranks, using the attached performance test.	3 min
6.	Remediate and retest any student who is a NO GO.	1 min
		<u>15 min</u>

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E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Prepare a Written Message on a Message Form

A. TRAINING OBJECTIVE

TASK: Each soldier will prepare a written message.

CONDITIONS: As a platoon leader, given a narrative description of a tactical situation and a message book.

TRAINING STANDARD:

- (1) Message must be printed in block letters.
- (2) Isolated letters must be spelled out phonetically.
- (3) Any abbreviation must be an authorized abbreviation.
- (4) Message must be addressed from a commander to a commander.
- (5) Designation of commander authorizing sending of messages must be recorded in sender box.
- (6) Precedence must be recorded in precedence block. IMMEDIATE precedence will be assigned if information directly affects the tactical situation; ROUTINE precedence will be assigned for other information.
- (7) All punctuation breaks must be marked with an X.
- (8) If sender determines classification is required, "Classification" must be printed in larger than normal letters at the top and bottom of text and circled.
- (9) Military date/time group and time zone designator must be recorded in time block.
- (10) Name and rank of writer must be recorded.
- (11) Message must be signed with last name and rank of writer.
- (12) Carbon must be destroyed.
- (13) Message must be completed within four minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: message book forms, 10 prepared situations.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate writing a message, using a general situation. Have students work with you in filling in the parts of the message.	5 min
3.	Give students another general situation and have them prepare a message under your control.	4 min
4.	Test students collectively, using the attached performance test.	4 min
5.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADMINISTRATIVE COMMENTS AND INFORMATION

1. If message books are used, instruct students to disregard instructions contained on the covers, as most will be outdated.

LESSON PLAN

Splice Field Wire with an Expedient Splice

A. TRAINING OBJECTIVE

TASK: Each soldier will splice two pieces of wire by tying the wires with a square knot and seizing the splice.

CONDITIONS: Given two 18-inch pieces of wire that have been stripped for splicing, with the ends protected by insulation, and one pair of pliers, TL-13-A.

TRAINING STANDARD:

- (1) Wires must be tied with a square knot, leaving $\frac{1}{4}$ " space between knot and insulation.
- (2) Steel strands must be cut flush with ends of insulation.
- (3) Left-hand end of copper strands must be crossed over crest of knot and wrapped over bared portion of right-hand wire until 2 turns are made on insulation. Right-hand end of copper strands must be wrapped in same manner over left-hand wire. Ends of copper strands must be trimmed at second turns on insulation.
- (4) Splice must be completed within four minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Seven pairs of pliers, TL-13A, 30 18-inch lengths of WD 1 wire, stripped for splicing.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate each of the steps in the wire splice, insuring that the students perform each step along with you.	5 min
3.	Conduct walk-through by having students perform steps on order. Observe and critique students during practice.	5 min
4.	Conduct practice session until students are ready to be tested.	4 min
5.	Test students collectively, using the attached performance test.	4 min
6.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 20 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Tie Basic Bowline, Bowline on a Loop, and Three-loop Bowline

A. TRAINING OBJECTIVE

TASK: Each soldier will tie the basic bowline, bowline on a loop, and the three-loop bowline.

CONDITIONS: Given a 6 foot length of line and statements of three situations requiring a bowline: end man on a climbing rope, take up slack on a rope, and piton anchor for three pitons.

TRAINING STANDARD:

- (1) Basic bowline must be tied for end man on a climbing rope.
- (2) Basic bowline must be tied by forming loop in standing end, passing running end up through loop, around back of standing end, and back through loop.
- (3) Half-hitch must be tied inside main loop.
- (4) Bowline on a loop must be tied to take up slack on a climbing rope.
- (5) Bowline on a loop must be tied by forming a loop in running end and a small loop (3") well up on standing end, bringing running end through small loop, threading lower loop through the protruding loop rope, positioning protruding loop on top of knot, and tightening loop.
- (6) Three-loop bowline must be tied for piton anchor with four pitons.
- (7) Three-loop bowline must be tied by folding rope in half, forming 3" loop 4" up standing end, pulling running end through 3" loop so that two 12" loops hang down, passing running end in back of standing end and back through 3" loop, and pulling resulting three loops tight.
- (8) Each knot must be tied within one minute.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Seven nylon ropes, 6' long.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate each step in the task, starting with the basic bowline. Insure that students perform each step along with you.	3 min
3.	Have students perform the walk-through following your instructions.	4 min
4.	Conduct practice until students are ready for test. Observe and critique students during practice.	3 min
5.	Test students collectively, following the attached performance exam criteria.	3 min
6.	Remediate and retest students who are NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Tie Rappel Seat

A. TRAINING OBJECTIVE

TASK: Each soldier will construct a sling rope seat for use in rappeling.

CONDITIONS: Given a snaplink and a nine-foot nylon sling rope.

TASK STANDARDS:

- (1) Center of sling rope must be placed on hip opposite dominant hand an an overhand knot must be tied in front of the body.
- (2) Ends of the rope must be brought between the legs (front to rear), around the legs, over the hips, and tied with a square knot and two half hitches on the side opposite the dominant hand.
- (3) Snaplink must be over the rope around the waist and the overhand knot with the gate up so that it opens away from the body.
- (4) Seat must be constructed in two minutes.

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: Two nine-foot nylon ropes, seven snaplinks.

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Demonstrate each of the steps in the task, insuring that the students perform each along with you.	3 min

SEQUENCE	ACTIVITY	TIME*
3.	Conduct walk-through by having students perform steps in tying seat on command. Observe and critique each student's practice.	3 min
4.	Conduct practice session until students are ready to be tested.	4 min
5.	Test students individually or collectively, using the attached performance test. If students are tested collectively, have them stand in a circle facing outward so they cannot observe each other during the test.	3 min
6.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

LESSON PLAN

Transmit Location Element of Call for Fire

A. TRAINING OBJECTIVE

TASK: Each soldier will transmit a location of target element for a call for fire, using shift from a known point.

CONDITIONS: As a simulated forward observer, given a narrative statement of the location of a target in relation to a reference point and the azimuth from him to the target.

TRAINING STANDARD:

- (1) Transmission must be made within 2 minutes.
- (2) Element must be in order: known point, observer-target-azimuth, lateral shift (if any), range shift (if any), and vertical shift (if any).
- (3) Parts of element must be stated: "From Registration _____, Direction _____, Right/Left _____ (if any), Add/Drop _____ (if any), Up/Down _____ (if any)."

B. INTERMEDIATE TRAINING OBJECTIVES

(None)

C. ADMINISTRATIVE INSTRUCTIONS

1. When training will be given:
2. Training location:
3. Who will be trained: Six classmates to be named.
4. Principal and assistant instructors:
5. Training aids and equipment: None

D. SEQUENCE	ACTIVITY	TIME*
1.	State training objective and reason for learning the task.	1 min
2.	Issue a complete fire command, using all five elements.	1 min
3.	Demonstrate each of the five elements step-by-step, using situational data. Insure that students perform each step.	3 min
4.	Conduct walk-through by supplying new data and having each student state each part of the elements correctly. Tell students which element to give.	3 min
5.	Conduct practice sessions by supplying new data and having students state each part of the element correctly and in order.	3 min
6.	Test students individually, using the attached performance test.	3 min
7.	Remediate and retest any student who is a NO GO.	1 min
		<hr/> 15 min

*Times (including total time) are only approximations and should not be used as a basis for pacing training. Student performance is the overriding basis for determining how much time to spend on any one activity.

E. SAFETY INSTRUCTIONS

(None)

F. ADDITIONAL COMMENTS AND INFORMATION

(None)

Annex G

PRACTICE-INSTRUCTION TASKS

III. Performance Tests

PERFORMANCE TEST

DEMONSTRATE THE LEFT SIDE PARACHUTE LANDING FALL

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Test Conditions:

If test is conducted outdoors, trainee will jump from a two- or four-foot platform into a sand or sawdust landing pit. If test is conducted indoors, trainee will jump from a two-foot platform onto a mat.

Necessary Equipment:

Two-foot or four-foot platform (or chair)
Landing pit or mat

Test Situation:

(TESTER WILL READ TO TRAINEE)

"During this test you will demonstrate left side parachute landing fall. Face the front of the platform and jump from the left side."

Performance Measure:

DEMONSTRATING THE LEFT SIDE PARACHUTE LANDING FALL

- | | | |
|---|---|---|
| A. Landed on balls of feet with knees bent slightly and feet together. | — | — |
| B. Upon contact with mat: | | |
| Lowered chin to chest. | — | — |
| Brought hands up in front of head with elbows in front of chest. | — | — |
| Bent and twisted torso sharply to the right, forcing body into an arc. | — | — |
| C. Rolled in the direction of drift (left) without hesitating on balls of feet. | — | — |
| D. Touched left calf, left thigh, left buttock, and fleshy muscles in the left side of the back to mat in sequence. | — | — |
| E. Brought feet around to right into line of drift. | — | — |
| F. Maintained tension in neck throughout fall. | — | — |

PERFORMANCE TEST
DETERMINE CHARGE FOR MORTAR ROUND

NO
GO GO INIT

Test Conditions:

Test will be conducted indoors. Trainee will be given a graphical firing scale 4.2-H-1, a table of corrections, and a worksheet with spaces for charge from scale, vertical interval, charge correction, and final charge. For each of three targets, trainee will be told the range to the target, the altitude of the target and the altitude of the mortar. The altitude for one target will be the same as the altitude for the mortar. One of the remaining targets will be at a higher altitude than the mortar; the other target will be at a lower altitude than the mortar.

Necessary Equipment:

1 graphical firing scale 4.2-H-1
1 table of corrections
1 worksheet

Personnel Requirements:

1 Tester

Test Situation:
(TESTER WILL READ TO TRAINEE)

"For this task you are serving in the fire direction center. An observer has reported the location of three targets. Determine the amount of charge needed to engage each target, and record the charge on the worksheet. You have 5 minutes for the three problems."

Performance Measure 1:

DETERMINING CHARGE FOR TARGET AT SAME ALTITUDE
AS MORTAR

- A. Adjusted plastic cursor so that gageline was aligned with point on range scale that corresponds with range to target.
- B. Recorded charge indicated by gageline on charge scale within 1/8.

— —
— —

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Performance Measure 2:

DETERMINING CHARGE FOR TARGET AT HIGHER ALTITUDE
THAN MORTAR

- | | | |
|--|-----|-----|
| A. Adjusted plastic cursor so that gageline was aligned with point on range scale that corresponds to range to target. | --- | --- |
| B. Charge recorded was within 1/8 of charge indicated by gageline on charge scale. | --- | --- |
| C. Recorded vertical interval, including plus signs, that corresponds to results of subtracting altitude of mortar position from altitude of target. | --- | --- |
| D. Recorded charge correction, with plus sign, that would be found by: | | |
| . Entering table of corrections at column corresponding to site indicated by gageline. | --- | --- |
| . Locating the interval in that column that included the determined vertical interval. | --- | --- |
| . Reading across that line to the left hand column to find the charge correction. | --- | --- |
| E. Recorded final charge that was within 1/8 of sum of charge found on scale and charge correction. | --- | --- |

Performance Measure 3:

DETERMINING CHARGE FOR TARGET AT ALTITUDE LOWER
THAN MORTAR

- | | | |
|---|-----|-----|
| A. Adjusted plastic cursor so that gageline was aligned with point on range scale that corresponds to range to target. | | |
| B. Charge recorded within 1/8 of charge indicated by gageline on charge scale. | --- | --- |
| C. Recorded vertical interval, including minus sign, that corresponds to result of subtracting altitude of mortar position from altitude of target. | --- | --- |

<u>GO</u>	<u>NO</u> <u>GO</u>	<u>INIT</u>
-----------	------------------------	-------------

D. Recorded charge correction, including minus sign, that would be found by:

. Entering table of corrections at column corresponding to site indicate by gageline.

. Locating the interval in that column that included the determined vertical interval.

. Reading across that line to the left hand column to find the charge correction.

E. Recorded final charge that was within 1/8 of sum of charge found on scale and charge correction.

Elapsed Time

PERFORMANCE TEST
DETERMINE CHARGE TO CUT STEEL I-BEAM

GO NO
 GO INIT

Test Situation:
(TESTER WILL READ TO TRAINEE)

"You are a platoon leader with the mission of destroying a bridge to prevent its access to the enemy. The support girders of the bridge are constructed of the type I-beam you have in front of you. Determine the charge to sever the I-beam. You have 2 minutes."

Test Conditions:

Test will be conducted indoors. Tester will provide trainee with an I-beam silhouette and demolition table.

Necessary Equipment:

Demolition Card Extract
I-Beam Silhouette cut from cardboard
Ruler

Performance Measure:

- A. Measured width and thickness of I-beam flange with the ruler.
- B. Entered demolition table at width and thickness (for flange) columns and located charge at intersection of columns.
- C. Measured width and thickness of the web with the ruler.
- D. Entered demolition table at width and thickness (for web) columns and located charge at intersection of columns.
- E. Doubled the flange charge.
- F. Added the flange and web charges.
- G. Rounded the charge to the highest whole number.
- H. Gave the final charge in pounds.

Test Standard:

All measures must be correctly accomplished. Measures A thru E are not sequential.

PERFORMANCE TEST
FOLD MAP SHEET FOR USE DURING AN EXTENDED PATROL

GO NO
 GO INIT

Test Conditions:

Test will be conducted indoors.

Necessary Equipment:

Unfolded standard military mapsheet
Razor blade, knife or scissors

Test Situation:
(TESTER WILL READ TO TRAINEE)

"You will prepare a map so it can be easily
carried and referenced while on an extended
patrol. You have 2 minutes."

Performance Measure:

FOLDING MAP FOR EXTENDED PATROL

- | | | |
|--|---|---|
| A. Folded map in half vertically twice and
unfolded map. | — | — |
| B. Folded map in half horizontally twice and
unfolded map. | — | — |
| C. Cut map horizontally along middle fold to
outer vertical folds without tearing map. | — | — |
| D. Folded map in the middle vertically, keeping
the two outer flaps flat and at right angles
to center fold. | — | — |
| E. Folded one cut portion to the right and other
cut portion to the left. | — | — |
| F. Folded map on middle horizontal fold. | — | — |
| G. Folded map on remaining vertical fold. | — | — |
| H. Folded map on remaining horizontal fold. | — | — |

Test Standard:

Map must be folded so 1/16 of total area is exposed
and 1/16 section can be referred to without
refolding entire map.

PERFORMANCE TEST
FOLD THE UNITED STATES FLAG

GO NO
 GO INIT

Test Conditions:

Test may be conducted indoors or outdoors.
Assistant will hold the flag at the blue
field edge and help fold as the trainee
requests.

Necessary Equipment:

1 United States flag

Personnel Requirements:

1 Tester
1 Assistant

Test Situation:

(TESTER WILL READ TO TRAINEE)

"At this station you will fold the United States
flag correctly on the first attempt. The assis-
tant will help you with the folding as you
request. You have 3 minutes."

Performance Measure:

FOLDING THE UNITED STATES FLAG

- | | | |
|---|-----|-----|
| A. Folded lower striped section over blue field.
(1st lengthwise fold) | ___ | ___ |
| B. Folded the folded edge over to meet the open
edge. (2nd lengthwise fold) | ___ | ___ |
| C. Started triangular fold by bringing striped
corner of the folded edge to the open edge. | ___ | ___ |
| D. Repeated folds until entire length of flag
was folded into a triangle with only the
blue field and margin showing. | ___ | ___ |
| E. Tucked margin into the pocket formed by folds
at blue field edge of flag. | ___ | ___ |

Elapsed Time

PERFORMANCE TEST
GIVE DISMOUNTED HAND AND ARM SIGNALS

NO
GO GO INIT

Test Conditions:

Test may be conducted indoors or outdoors. Tester will read trainee a situation that requires moving troops using five hand and arm signals. Trainee will give the signals after the situation is presented.

Necessary Equipment:

Two narratives of situations that require using five hand and arm signals to move troops.

Personnel Requirements:

1 Tester

Test Situation:
(TESTER WILL READ TO TRAINEE)

"You are a squad leader. (Read situation selected.) Give the appropriate signals."

Note: "If trainee forgets part of situation, tester will restate the situation."

Performance Measure 1A:

GIVING DISMOUNTED HAND AND ARM SIGNALS FOR ASSEMBLE, LINE FORMATION, MOVE OUT, AND AS YOU WERE

- | | | |
|--|---|---|
| A. Gave signal for ASSEMBLE.
(At position of attention, raised arm vertically overhead, palm to the front, and waved in large horizontal circles.) | — | — |
| B. Gave signal for LINE FORMATION.
(At position of attention, raised both arms to the side until horizontal with arms and hands extended and palms down.) | — | — |
| C. Gave signal for ATTENTION.
(At position of attention, extended the arm sideways above horizontal, palm to the front; waved arm to and away from the head several times.) | — | — |

	<u>GO</u>	<u>NO</u> <u>GO</u>	<u>INIT</u>
D. Gave signal for MOVE OUT. (At position of attention, faced the desired direction of movement, extended the arm to the rear with palm up, then swung it overhead and forward until it was horizontal with palm down.	—	—	
E. Gave signal for AS YOU WERE. (At position of attention, raised both arms and crossed them overhead with palms to the front.)	—	—	

Performance Measure 1B:

GIVING DISMOUNTED HAND AND ARM SIGNALS FOR DOUBLE
TIME, QUICK TIME, COLUMN RIGHT, COLUMN LEFT, AND
HALT

A. Gave signal for DOUBLE TIME. (Raised hand to shoulder with fist closed, and thrust fist upward to full extent of the arm and back to the shoulder rapidly several times.)	—	—	
B. Gave signal for QUICK TIME. (Extended arm horizontally sideward, palm to the front and waved arm slightly downward several times keeping arm straight.)	—	—	
C. Gave signal for COLUMN RIGHT. (With back to troops, extended right arm horizontally, palm to front.)	—	—	
D. Gave Signal for COLUMN LEFT. (With back to troops, extended left arm horizontally, palm to front.)	—	—	
E. Gave signal for HALT. (Raised hand upward to full extent of arm, palm to the front.)	—	—	

	NO	
GO	GO	INIT

Test may be conducted indoors or outdoors. Tester will read trainee two situations that require directing the movement of a platoon of tanks with mounted arm and hand signals. Trainee will give the required signals after each situation is presented.

None

1 Tester

"You are a platoon leader commanding five tanks on the move. Signal your platoon to turn right, open up, and form a wedge formation."

Performance Measure 1:

A. Gave signal for RIGHT TURN.

(with back to vehicles, extended right arm upward at 45° angle, with index finger extended and rest of right hand in a fist.)

B. Gave signal for OPEN UP.

(Facing vehicles, extended both arms vertically with fingers touching and palms to the rear, then lowered arms to horizontal with palms down.)

C. Gave signal for WEDGE FORMATION.

(Facing vehicles, held both arms overhead, bent at elbows, with fingers together and palms facing each other.)

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Test Situation (Cont'd):

"Signal your platoon to close up, form a line formation, then form an echelon right formation."

Performance Measure 2:

GIVING MOUNTED ARM AND HAND SIGNALS FOR CLOSE UP, LINE FORMATION, AND ECHELON RIGHT

- | | | |
|---|-----|-----|
| A. Gave signal for CLOSE UP.
(Facing vehicles, extended both arms horizontally with palms up, then raised arms to vertical with fingers touching and palms to the rear.) | ___ | ___ |
| B. Gave signal for LINE FORMATION.
(Facing vehicles, extended both arms to horizontal with palms down.) | ___ | ___ |
| C. Gave signal for ECHELON RIGHT.
(Facing vehicles, extended right arm upward at 45° angle and left arm downward at 45°, with both palms to the front.) | ___ | ___ |

Overall Elapsed Time

PERFORMANCE TEST
ISSUE INITIAL FIRE COMMAND FOR M60A1 TANK

NO
GO GO INIT

Test Conditions:

Tester will show the trainee visuals, with range to target indicated, of tracked vehicle, wheeled vehicle, and personnel targets. Visuals will be shown in random order for 10 seconds each. Tester will announce the loader's and gunner's response to each fire command.

Necessary Equipment:

- 1 visual, with range to target indicated, of tracked vehicle
- 1 visual, with range to target indicated, of wheeled vehicle
- 1 visual, with range to target indicated, of personnel

Personnel Requirements:

- 1 Tester

Test Situation:

(TESTER WILL READ TO TRAINEE)

"During this test you will issue initial fire commands for an M60A1 tank. I will show you visuals of three stationary targets for 10 seconds each. The range to each target is shown on the visual. Issue the fire command for each target. I will announce the loader's and gunner's response to each command."

NOTE: If trainee makes an error in a command but corrects the command with the proper correction procedure, he will be scored GO. Correction procedure is: Announce CORRECTION, correct the element in error, announce all elements after the corrected element.

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Performance Measure 1:

ISSUING INITIAL FIRE COMMAND FOR ENGAGING TRACKED
VEHICLE TARGET

NOTE: Tester shows visual of tracked vehicle.

- | | | |
|---|-----|-----|
| A. Announced GUNNER as alert element. | ___ | ___ |
| B. Announced HEAT as ammunition element. | ___ | ___ |
| C. Announced TANK as description element. | ___ | ___ |

NOTE: Tester - IDENTIFIED, UP

- | | | |
|---|-----|-----|
| D. Announced FIRE as execution element. | ___ | ___ |
|---|-----|-----|

Performance Measure 2:

ISSUING INITIAL FIRE COMMAND FOR ENGAGING WHEELED
VEHICLE TARGET

NOTE: Tester shows visual for wheeled vehicle.

- | | | |
|---|-----|-----|
| A. Announced GUNNER as alert element. | ___ | ___ |
| B. Announced COAX as ammunition element. | ___ | ___ |
| C. Announced TANK as description element. | ___ | ___ |

NOTE: Tester - IDENTIFIED, UP

- | | | |
|---|-----|-----|
| D. Announced FIRE as execution element. | ___ | ___ |
|---|-----|-----|

Performance Measure 3:

ISSUING INITIAL FIRE COMMAND FOR ENGAGING PERSONNEL
TARGET

NOTE: Tester shows visual of personnel.

- | | | |
|---|-----|-----|
| A. Announced GUNNER as alert element. | ___ | ___ |
| B. Announced HEP as ammunition element. | ___ | ___ |
| C. Announced TROOPS as description element. | ___ | ___ |
| D. Announced RANGE in even hundreds or digit
by digit. | ___ | ___ |

NOTE: Tester - IDENTIFIED, UP

- | | | |
|---|-----|-----|
| E. Announced FIRE as execution element. | ___ | ___ |
|---|-----|-----|

PERFORMANCE TEST
MEASURE RESISTANCE WITH MULTIMETER TS-352B/U

GO NO
 GO INIT

Test Conditions:

Test will be conducted indoors. Multimeter will have batteries installed. Function switch will be set at DC CURRENT, range switch will be set at RX100, and test leads will not be plugged in. Tester will select a resistor for trainee to measure.

Necessary Equipment:

1 Multimeter TS-352B/U
Several color-coded resistors

Personnel Requirements:

1 Tester

Test Situation:

(TESTER WILL READ TO TRAINEE)

"During this test you will measure the resistance of a resistor. Your multimeter has the batteries installed. Set up the multimeter and measure the resistance of this resistor. You have 2 minutes."

Performance Measure 1:

ZERO ADJUSTING MULTIMETER

- | | | |
|---|-------|-------|
| A. Turned FUNCTION switch to OHMS. | _____ | _____ |
| B. Plugged black test lead to OHMS - DC + AC jack. | _____ | _____ |
| C. Plugged red test lead into OHMS jack. | _____ | _____ |
| D. Set range switch on RX10000 range. | _____ | _____ |
| E. Connected test prods across unknown resistance. | _____ | _____ |
| F. Turned the range switch counterclockwise, one range at a time, until meter pointer stopped close to midscale. | _____ | _____ |
| G. Touched the two test lead prods together and turned OHMS ZERO ADJ knob until meter pointer appeared directly over the 0 on the right hand of the OHMS scale. | _____ | _____ |

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Performance Measure 2:

MEASURING RESISTANCE

- | | | |
|--|---|---|
| A. Connected test prods across resistance to be measured. | — | — |
| B. Read meter indication on the OHMS scale. | — | — |
| C. Multiplied reading by factor indicated on range switch. | — | — |
| D. Resistance announced was accurate within 10%. | — | — |

PERFORMANCE TEST
PERFORM READY POSITIONS OF RIOT BATON
MANUAL OF ARMS

GO NO
 GO INIT

Test Conditions:

Test will be conducted indoors or outdoors.

Necessary Equipment:

1 standard issue riot baton or two-foot stick.

Personnel Requirements:

1 Tester

Test Situation:

(TESTER WILL READ TO TRAINEE)

"During this test you will demonstrate part of the Manual of Arms for the riot baton. I will give you three commands, assume the correct position for each command. 'PARADE REST.'"

NOTE: Measures are written for right-handed trainees. All trainees must perform the manual the same way. If more trainees are left-handed, correct hand positions are the reverse of the positions specified in the measures.

Performance Measure 1:

DEMONSTRATING PARADE REST WITH RIOT BATON

- A. Placed feet shoulder width apart. _____
- B. Held baton so that: _____
- Left palm faced out. _____
- Right palm faced in toward the body. _____
- C. Held baton approximately six inches from _____
- each end. _____

Test Situation (Cont'd):

Tester, "PORT ARMS."

	NO	
GO	GO	INIT

Performance Measure 2:

DEMONSTRATING PORT ARMS WITH RIOT BATON

- A. Placed feet shoulder width apart.
- B. Held baton so that:
 - Right hand and forearm were parallel to the ground.
 - Left hand was level with the left shoulder.
 - Striking end of baton bisected the angle between the neck and the left shoulder.
- C. Held baton approximately eight inches from the body.

—	—
—	—
—	—
—	—
—	—

Test Situation (Cont'd):

Tester, "ON GUARD."

Performance Measure 3:

DEMONSTRATING ON GUARD WITH RIOT BATON

- A. Placed left foot in front of the right foot.
- B. Spread feet and slightly bent the knees.
- C. Held end of baton snugly against hip with right hand.
- D. Bent body slightly forward at waist.
- E. Bent left arm sufficiently to provide for a thrust.
- F. Pointed baton at throat level.

—	—
—	—
—	—
—	—
—	—
—	—

PERFORMANCE TEST
PREPARE A WRITTEN MESSAGE ON A MESSAGE FORM

NO
GO GO INIT

Test Situation:
(TESTER WILL READ TO TRAINEE)

"You will prepare a written message based on the information provided you. Use local time and today's date. You have 4 minutes."

Test Conditions:

Test will be conducted indoors. Tester will give trainee a written description of a situation for a message.

Necessary Equipment:

Message forms
Written descriptions of a tactical situation

Performance Measure:

- | | | |
|---|-----|-----|
| A. Printed message in block letters. | ___ | ___ |
| B. Spelled out isolation letters phonetically. | ___ | ___ |
| C. Used only authorized abbreviations. | ___ | ___ |
| D. Addressed messages to a commander and from a commander. | ___ | ___ |
| E. Recorded designation of commander by whose authority message is sent in sender block. | ___ | ___ |
| F. Assigned precedence of IMMEDIATE if information directly affects the current tactical situation and ROUTINE for other information. | ___ | ___ |
| G. Marked all punctuation breaks with "X". | ___ | ___ |
| H. If sender determined classification was required, printed "Classification" in larger than normal letters at the top and bottom of text and circled "Classification." | ___ | ___ |
| I. Recorded military date/time group and time zone designator in time block. | ___ | ___ |
| J. Recorded name and rank of writer and signed message with last name and rank. | ___ | ___ |
| K. Destroyed carbon. | ___ | ___ |

Test Standard:

Sequencing not graded except that carbon must be destroyed last.

PERFORMANCE TEST
SPLICE FIELD WIRE WITH AN EXPEDIENT SPLICE

GO NO
GO GO INIT

Test Conditions:

Test may be conducted indoors or outdoors. Wires will be stripped so that four inches of wire are exposed and the end of each wire is protected by insulation.

Necessary Equipment:

- 1 Pair Pliers, TL-13 A
- 2 Eighteen-inch pieces of field wire stripped for splicing
- 1 Table

Personnel Requirements:

- 1 Tester

Test Situation:
(TESTER WILL READ TO TRAINEE)

"During this test, you will splice two pieces of wire with an expedient splice. Tie the wires and seize the splice. You have 4 minutes."

Performance Measure 1:

TYING SQUARE KNOT

- A. Tied wires together with square knot leaving 1/4 inch space between knot and insulation.

Performance Measure 2:

SEIZING SPLICE

- A. Removed last 2-inch section from each wire.
- B. Separated steel strands from copper strands.
- C. Cut steel strands flush with ends of insulation.
- D. Crossed left-hand end of copper strands over crest of knot and wrapped strands over bared portion of right-hand conductor until two turns had been made on insulation.

Overall Elapsed Time

PERFORMANCE TEST
TIE BASIC BOWLINE, BOWLINE ON A LOOP, AND
THREE-LOOP BOWLINE

GO NO
 GO INIT

Test Conditions:

Test will be conducted indoors or outdoors.
Each trainee will tie all three knots. Tester
will tell trainee the situation for the knot,
but will not tell him which knot to tie.

Necessary Equipment:

Rope at least 6 feet long

Test Situation:
(TESTER WILL READ TO TRAINEE)

"During this test you will tie three types of
bowline knots: the basic bowline, bowline on
a loop, and the three-loop bowline. I will tell
you the situation and you will tie the appropriate
knot. You are the end man on a climbing rope.
Tie an appropriate knot. You have 1 minute."

Performance Measure 1:

TYING BASIC BOWLINE

- | | | |
|---|-----|-----|
| A. Formed loop in standing end. | ___ | ___ |
| B. Passed running end up through loop. | ___ | ___ |
| C. Passed running end around back of standing end. | ___ | ___ |
| D. Passed running end back through first loop
and pulled knot tight. | ___ | ___ |
| E. Tied half-hitch inside main loop. | ___ | ___ |

Test Situation (Cont'd):

"You want to take up slack between two men on a
climbing rope. Tie an appropriate knot. You
have 1 minute."

	NO	
<u>GO</u>	<u>GO</u>	<u>INIT</u>

Performance Measure 2:

TYING BOWLINE ON A LOOP

- | | | |
|---|---|---|
| A. Formed loop in running end by folding rope in half. | — | — |
| B. Formed small loop (3") well upon standing end. | — | — |
| C. Brought running end up through small loop far enough to get working slack. | — | — |
| D. Threaded lower loop through the protruding loop. | — | — |
| E. Insure that protruding loop was on top of knot and tightened knot. | — | — |

Test Situation (Cont'd):

"You need a piton anchor for three pitons. Tie an appropriate knot. You have 1 minute."

Performance Measure 3:

TYING THREE-LOOP BOWLINE

- | | | |
|--|---|---|
| A. Formed running loop by folding rope in half. | — | — |
| B. Formed 2-3" loop well up on standing end (3-4"). The loop must cross, facing the body with the loop facing downward. | — | — |
| C. Pulled the running end through the front of the loop approximately 18", leaving two loops approximately 12" hanging down. | — | — |
| D. Passed running end in back of standing end and back through loop. | — | — |
| E. Pulled all three loops tight. | — | — |

Overall Elapsed Time

PERFORMANCE TEST
TIE RAPPEL SEAT

NO
GO GO INIT

Test Conditions:

Test can be conducted indoors or outdoors.

Necessary Equipment:

A snaplink and a nylon sling rope

Personnel Requirements:

1 Tester

Test Situation:
(TESTER WILL READ TO TRAINEE)

"During this test you will construct a sling rope seat that you could use in rapelling. Your dominant hand is your braking hand. You have 2 minutes."

Performance Measure:

THE SEAT RAPPEL

- | | | |
|--|---|---|
| A. Placed sling rope across his back until center of its length is on the hip opposite to the dominant hand. | — | — |
| B. Tied an overhand knot in front of the body. | — | — |
| C. Brought the ends of the rope between the legs (front to rear), around the legs, and over the hips. | — | — |
| D. Tied rope with a square knot and two half hitches on the side opposite the braking hand. | — | — |
| E. Placed the snaplink (gate down and opening toward the body) through the single rope around the waist and the two ropes forming the overhead knot. | — | — |
| F. Rotated snaplink one half turn so that the gate was up and opened away from the body. | — | — |

PERFORMANCE TEST
TRANSMIT LOCATION OF TARGET ELEMENT FOR CALL FOR FIRE

NO
GO GO INIT

Test Conditions:

Test will be conducted indoors. Trainee will be given a statement of the location of a target in relation to a reference point and the azimuth from the observer to the target. Tester will select a situation to present each trainee.

Necessary Equipment:

Narrative descriptions of several target locations.

Personnel Requirements:

1 Tester

Tester Situation:

(TESTER WILL READ TO TRAINEE)

"For this test you are a forward observer for a field artillery battery. You have acquired the following target: (Read situation selected.) Transmit the Location of Target element for a call for fire using shift from a known point. You have 2 minutes to prepare your transmission."

Performance Measure:

TRANSMITTING LOCATION OF TARGET ELEMENT FOR A CALL FOR FIRE USING SHIFT FROM A KNOWN POINT

- | | | |
|---|-----|-----|
| A. Stated known point as "From Registration ____." | ___ | ___ |
| B. Stated observer-target azimuth as "DIRECTION ____." | ___ | ___ |
| C. Stated lateral shift from known point, if any, as "RIGHT/LEFT ____." | ___ | ___ |
| D. Stated range shift from known point, if any, as "ADD/DROP ____." | ___ | ___ |
| E. Stated vertical shift from known point, if any, as "UP/DOWN ____." | ___ | ___ |
| F. Stated parts of element in order: known point, observer-target azimuth, lateral shift (if any), range shift (if any), and vertical shift (if any). | ___ | ___ |

Annex H

INSTRUCTOR GUIDELINES AND MODERATOR GUIDELINES FOR CONDUCT OF STUDENT PRESENTATIONS

INSTRUCTOR GUIDELINES

FIRST HOUR

The first hour is devoted to presenting the principles of performance-oriented training. The most important part of the hour is the time soldiers spend discussing application and violation of the principles in the videotape of three training incidents. Course members will almost always recognize without help that the example of training on the compass is bad training, that the grenade launcher example is better but still not good training, and that the M60 machinegun example is good training. The instructor's responsibility is to guide discussion so course members realize the impact of the principles of the quality of training.

Lensatic Compass

The most glaring violation in this example is the amount of irrelevant information presented. But more serious is the absence of hands-on performance at any time in the instruction. Although this is an extreme example, such training is possible if a commander's guidance does not go beyond "Give your soldiers some training on the compass." Discussion of this example should make it clear that, regardless of an instructor's fluency, a lecture about a task does not constitute good training.

Grenade Launcher

This segment has the form of performance training but lacks effective coaching and testing. The instructor applies the principles of presenting only necessary information and getting soldiers to begin performing the task immediately. However, he violates the principles related to allowing self-paced practice, coaching effectively, and establishing quality control with performance tests. An important point that may need to be emphasized is that time spent giving the knowledge test is time wasted. The purposes of testing during training are to identify (a) soldiers who need further training, (b) areas to address during remedial training, and (c) parts of the training approach to be revised. An oral knowledge test does not give enough information to fulfill any of those purposes.

M60 Machinegun

This example is intended to illustrate application of the six principles. Two points should be stressed during discussion of this

incident. First, the six principles are interrelated. Second, good performance training appears to be natural. But the naturalness is the result of an instructor preparing the block carefully. Such training requires not only close analysis of the training objective to identify necessary information and good practice situations, but also enough discipline to focus training on the students rather than on the instructor.

SECOND HOUR

The second hour is devoted to presenting the techniques of demonstrating effectively and the phases of performance training. Because students learn to perform two simple tasks, the hour will be more informal than a typical hour. Remember, however, that the purposes of this hour are serious. Tying a knot is a good vehicle for showing the principles of demonstrating effectively; folding the box is a good illustration of the phases of performance training.

For the knot-tying task to be effective, students must not be able to master the task from the poor demonstration, yet be able to master it easily from the good demonstration. With a fairly small group (8-12), that can be achieved readily. With a larger group the good demonstration is more difficult. If possible, assign assistant instructors to demonstrate how to tie the knot. If assistants are not available, use a heavier string and perform each step more expansively than usual. Regardless of the size of the group, require students to perform with you or your assistants--even during the ineffective demonstration.

The box-folding task is also complicated if the class size is larger than 12. Again, it is a good idea to use several assistants to demonstrate the task and coach during practice. If possible, assign faster students to help slower students during the practice.

Because the tasks during the second hour are not related to the military, some students may be offended by having to learn them. If that happens, explain that the tasks were chosen because they are unfamiliar to almost all soldiers, short and very inexpensive. But most important, they accomplish the purposes of the hour.

THIRD HOUR

The third hour is devoted to presenting procedures for administering performance tests reliably and reviewing the performance training process. Through use of the sample BCT performance test, students become aware of the amount of information contained in a properly prepared performance test that can assist them in attaining

their instructional objective. The various "do's" and "don'ts" that students are told about administering performance tests may appear obvious, but they are principles that are often violated during practical exercises. This is particularly true when an instructor must switch from a very informally conducted class to a more structured testing period. The training process review videotape presents few problems for the instructor. The videotape presents a good example of performance training. Insure that students follow the checklist while observing the videotape as this will assist in emphasizing the performance training phases.

MODERATOR GUIDELINES FOR CONDUCT AND CRITIQUE OF PRESENTATIONS

USE OF THE CRITIQUE CHECKLIST

The "Checklist for Critique of UTRAIN Practical Exercise" is a list of characteristics which have been found to be important in performance instruction. It is intended as an aid to reinforce the major points of UTRAIN and to focus discussion during the critique. Soldiers should not be expected to achieve all "GOs" for their first presentation. Therefore, the checklist should not be used as a grading criterion for the course. Similarly, the checklist is not designed for use as a training inspection checklist in units. The importance of individual items on the checklist will vary with the subject, objective, and background of individuals being taught. The checklist is valuable, however, both in UTRAIN presentations and in unit training situations. Before presenting a class, an instructor should review his plans in light of the items listed on the checklist.

As the presentations of UTRAIN classes progress, the raters usually rely less on the checklist.

GRADING STUDENT PRESENTATIONS

The UTRAIN course is designed as a learning exercise, and students should not necessarily be considered as effective or ineffective performance instructors after the experience of only one practice exercise in performance-oriented training methods. Therefore, the course was not designed with the idea of academic grading. This does not preclude rewarding exceptional presentations by verbal or even written recognition. Conversely, attention should be called to the student who is obviously not prepared for his presentations. Most schools or facilities will have means other than academic achievement to influence student performance. Those channels should be used to recognize students at either end of the quality spectrum of presentations.

ORGANIZATION OF STUDENT PRESENTATIONS

Before student instruction begins, the moderator must determine the order of presentation and the list of raters for each task. Fifteen minutes have been allotted for each training session (presentation and student learning). Tryouts have shown, however, that some tasks take longer than others. Since the criterion of good performance training is that students master the objective rather than instructors just filling a block of time, the times should be flexible. To allow this flexibility, a "short" task should be paired with a "long" task. Such pairings allow breaks after every other presentation at approximately 50-minute intervals. Although the time required for a task will vary on the basis of students' previous exposure to similar tasks, the shorter tasks, based on pilot presentations of the course, are indicated on the list of 15 tasks.

In assigning students to a role as instructor, trainee, or rater for tasks, the moderator should see that every student serves approximately the same number of times in each role. The "Student PE Assignments" chart will help make these assignments. Names may be entered on the chart as students are assigned to tasks, then later each PE session may be introduced by the moderator announcing the roles for that session. If the student instructor needs an assistant, one of the raters should be used.

CRITIQUE OF STUDENT PRESENTATIONS

As indicated in the "Student PE Assignments" chart, raters will be assigned primary responsibility for the sections of the checklist form. If three raters are used, one rater should be responsible for the demonstration, one for the walk-through and practice, and one for the performance test and the general category. Although each rater will be primarily responsible for the section or sections assigned him, he should understand that he is also expected to contribute during discussions of other sections and should, therefore, evaluate all sections.

At the conclusion of a PE session the moderator should ask the assigned rater for "NO-GO" items as well as the strong points for the demonstration phases. After the assigned rater's critique the other raters should be allowed to disagree with, or add to, the comments. Comments from the six "students" should also be elicited since they are in an excellent position to recognize strong or weak points. The process of critique by the assigned rater and additional comments by the other raters should be repeated until all phases of the instruction are discussed. The moderator should comment only if an error is not identified, raters are unable to agree about whether something is an

STUDENT PE ASSIGNMENTS

NAME OF STUDENT

TASK

	1	2	3	4	5	6	7	8	9	10
	I	Rt	Rw	Rd	S	S	S	S	S	S
	S	I	Rt	Rw	Rd	S	S	S	S	S
	S	S	I	Rt	Rw	Rd	S	S	S	S
	S	S	S	I	Rt	Rw	Rd	S	S	S
	S	S	S	S	I	Rt	Rw	Rd	S	S
	S	S	S	S	S	I	Rt	Rw	Rd	S
	S	S	S	S	S	S	I	Rt	Rw	Rd
	Rd	S	S	S	S	S	S	I	Rt	Rw
	Rw	Rd	S	S	S	S	S	S	I	Rt
	Rt	Rw	Rd	S	S	S	S	S	S	I

I = Instructor

S = Student

Rd = Rater - demonstration

Rw = Rater - walk-through and practice

Rt = Rater - performance test and general

error, the raters' conclusion violates a principle of performance training or effective demonstration, or a key point needs to be emphasized. Otherwise, the moderator need only insure that all raters contribute, and that the discussion moves quickly.

After the discussion period the student instructor should be given an opportunity to see the checklists.

COMMON ERRORS IN STUDENT PRESENTATIONS

The raters will usually identify all the errors and strengths in a presentation. Errors, however, will sometimes be overlooked, especially for the first few presentations. When that happens, the moderator must identify each overlooked error and be sure the course members understand how to rectify it. This section contains the errors most commonly omitted from the raters' critique.

Relying on verbal description to carry demonstration

Most of the officers taking the course will have had at least four years of higher education, and others will have attended formal service schools. During that time they will have learned most of their information from lectures. Their concept of a good instructor is a good lecturer. If the course is to be successful, their model of a good instructor will have to change to a man who shows, rather than tells, how to perform a task. An example of the tendency to rely too much on verbal description is telling that a square knot is tied "right over left, left over right," rather than showing how the knot is tied, then watching the man tie the knot.

The moderator should be sure that all tendencies to rely on verbal description to carry the demonstration are identified. Conversely, examples of clear, non-verbal demonstrations should be praised.

Failing to relate information to a step in the task

Performance-based instruction is developed from a training objective. A good performance trainer will demonstrate the task as defined by the objective and give essential information as it relates to the performance of each step. Any information that does not relate to the performance of the objective is non-essential and should not be given. There is a tendency, however, for military instructors to talk about characteristics of the equipment rather than steps in the task. A demonstration organized around the equipment will tend to contain information not needed for performing the task.

Similarly, many course members organize demonstrations for tasks that require a format around the format items. For example, when training men to issue a call for fire, a good performance trainer will issue a call for fire for a specified situation, then discuss the characteristics of each element in that situation. Some soldiers may choose to talk about each element and the ways it varies under different conditions. It is possible that a trainer may complete the block without ever issuing a complete call for fire. Such a presentation gives soldiers a mass of information which they must organize themselves.

A related problem is the emphasis often placed on nomenclature. The issue should be "What nomenclature must soldiers know to perform this task?" For most tasks, both in UTRAIN and in a unit, nomenclature is unnecessary information. This does not mean that nomenclature should never be taught. The difference is in how nomenclature is taught. For example, to teach a group of soldiers all the proper names of the parts of the pistol before they have had their hands on the weapon is of little value and wastes valuable training time. Rather, nomenclature should be taught in a functional context. While disassembling the pistol the instructor refers to each part by its proper nomenclature. Soldiers will learn the nomenclature as a natural process through continued use and instructor reinforcement. That approach is more efficient than teaching a "nomenclature block" before any other training with the equipment.

The same problem often arises with functioning and characteristics of equipment. These should be taught only when they are relevant to the task at hand. The fact that the nylon climbing rope has a dry breaking strength of 3,840 pounds is irrelevant to constructing a sling seat. It becomes important, however, when soldiers learn to construct an equipment suspension traverse. That is when it should be taught.

Changing test situation to ease administration of test

The performance tests used in UTRAIN seek to simulate job situations. The closer a test comes to the job situation, the better it is. Thus, a task that requires a verbal response on the job (e.g., issuing a fire command) should be tested with a verbal response. But, since oral fire commands can be tested adequately only one at a time, trainers may be tempted to have the students write their responses. Also, some tasks must be performed by one person with no visual cues (e.g., in giving mounted arm and hand signals). If the trainer tests four men at once where they can see each other, they will receive prompts from watching each other.

The moderator must be sure that any test situation that reduces the level of job simulation is identified as a weakness in a presentation. On the other hand, the moderator should reinforce men who develop test situations that ease test administration without degrading the level of job simulation.

Course members will be most familiar with a "county fair" arrangement for administering performance tests. In such an arrangement, soldiers rotate through stations where they are usually tested individually or in very small groups. This individual testing maintains the level of job simulation. Unfortunately, most units have neither the facilities nor the personnel to test each soldier individually. It is desirable, therefore, for soldiers in the course to be able to test several people at once while maintaining both the level of job simulation and the ability to identify errors in performance. Tasks where the produce can be analyzed to identify the cause for error, such as splicing wire, or tasks that require a worksheet, such as computing a mortar charge, are appropriate for testing in a group. Other tasks, such as giving mounted arm and hand signals, can be tested in a group if men are positioned so they cannot see each other.

Failing to give positive feedback

One of the major emphases of the course is the importance of telling a student when he is doing a task correctly. In the presentations, however, the instructors rarely give sufficient feedback. That fact is not surprising since the situation is artificial and the students are peers of the instructors. The instructors sometimes start to give positive reinforcement but, perhaps out of embarrassment, change to a parody of positive feedback. When an instructor does give effective feedback, the moderator should be sure that fact is recognized.

Absence of skill practice

If students are to learn at their own pace, instructors must organize and monitor periods in which the students practice performing the task. Some students will need to practice more than others to reach mastery. The moderator should insure that instructors are praised for conducting practice periods that allow self-paced practice. Efficient use of faster learners as peer instructors should be especially emphasized.

Occasionally, soldiers in the course will master a task after the walk-through period, and the instructors, very reasonably, skip the practice period and move directly into the performance test. When that happens the moderator should encourage discussion of effective strategies for a practice period for soldiers who do not learn as quickly as those in this course.

Failing to put task into context

Checkpoint 2 for evaluating an instructor's demonstration is "gave a reason for learning the skill." The instructor must do more than state the training objective to fulfill this requirement. The task should be put into a job context that specifies the most immediate way the student will be able to use the skill in his job. Statements such as "it will help you survive on the battlefield" are incomplete reasons for learning the skill. Since the situation that the soldiers are in is artificial and the reason is rarely a "real" one, this point will have to be emphasized.

Failing to specify steps in an internal process

The principles of performance training apply to mental tasks as well as to physical tasks. Mental tasks, however, are obviously more difficult for the instructor to demonstrate. Some tasks, such as determining the charge for a mortar round, have definite steps that must be performed mentally. Instructors usually state that they are adding or subtracting, but rarely tell how they decided to add rather than subtract. The moderator should insure that the raters discuss the omission of any mental steps from the demonstration. The discussion of mental steps not specified in the demonstration can be centered around Checkpoint 7--"Demonstrated each step in the task."

Inefficient use of time

Although UTRAIN practical exercises are not timed presentations, the moderator must be aware of practices which would indicate a waste of training time. Because practice tasks are relatively simple, the time wasted is usually only measured in minutes, but the moderator must point out unnecessary use of time as indicative of inefficient training. Besides the errors already discussed, there are two common mistakes which waste time:

- (1) Inefficient demonstration. Despite the instruction received on demonstrating effectively, soldiers occasionally revert to a demonstration which requires trainees to sit passively during the entire demonstration. The demonstration must then be repeated with the student performing the steps along with the instructor.

- (2) Failure to recognize student progress. An important UTRAIN teaching point is that the process of performance training is flexible. This flexibility is possible because an efficient instructor focuses his attention on his students rather than on his presentation. There are several practical exercises where the phases can be combined or eliminated. Generally, the phases that are affected are walk-through and individual practice. The only phase that cannot be modified in its application is testing. Some instructors, because they have been initially taught the four phases, will lock their presentation into these phases. This indicates that they are failing to key on their students. While the instructor plans for all phases, he remains flexible enough in his presentation to use only the minimum time required to achieve student mastery.

Inflexible classroom arrangement

Before the practical exercises start, soldiers should be told that arranging the classroom is their responsibility. The moderator should then insure that the raters are close enough to observe all actions of the instructor and trainees, but placed so they will not interfere with or distract either. A portable chalkboard, chalk, etc., should be available, and a large flip-type pad with tear-off sheets on an easel is useful for some tasks. It is preferable to have students in chairs at small tables for those tasks requiring students to do individual work. These aids, however, are only used to expedite this course, and the point should be made that in units, performance training can be conducted with fewer aids and is often best taught in the job location, such as the motor pool, field, squad room, with only the materials to be used on hand.

Because of student backgrounds, in both pre-service and in-service schools, some student instructors will arrange the classroom in a formal manner, i.e., trainees seated at desks with the instructor standing several paces away as if he were going to deliver a lecture. The point should be made during critique that because of the small groups involved in performance training, this arrangement should be avoided. Conversely, if the instructor too closely involves himself with his students, this should be recognized.

SPECIFIC MODERATOR GUIDELINES

Following are some moderator guidelines for the individual tasks which emphasize points that were learned during tryouts of this course and should serve the new moderator with initial discussion points. As

moderators become more experienced in observing the classes, they should modify and supplement these specifics with their own and pass the information on to successive moderators.

Demonstrate Left Side Parachute Landing Fall

This task will require more individual practice than many other tasks and places a great deal of responsibility on the instructor for individual coaching. Every effort should be made to select as students those soldiers who are not airborne qualified, although the instructor may be. The instructor should identify as quickly as possible those individuals who have mastered the task and use them as peer instructors. Because there is an element of danger in this task, the instructor must not force the student to take the performance test before he is ready.

This task differs in that once the student jumps from the platform, the rest of the desired performance must follow automatically. It is difficult for students to perform each step after it is demonstrated, because it is hard to break the task into small steps. One effective approach to this task would be for the instructor to demonstrate the full fall as part of putting the task into a job-relevant context, then emphasize the checkpoints which indicate mastery during the demonstration. Students should assume each checkpoint position as the instructor shows and describes it in the demonstration. During practice the students should concentrate on bringing all key points together in a continuous movement.

During testing it is important that the instructor closely observe the complete performance of each student.

This task should only be used if outdoor facilities are available.

Determine the Charge for a Mortar Round

This task combines physical activity (manipulating the firing scale) with a mental process. Since most of the vital steps are cognitive, the task is difficult to demonstrate. Even though some principles of effective demonstration will not apply, this task shows that performance-oriented training is appropriate to cognitive tasks.

In tryouts of the course this task ranged from the best to the worst student presentation. When the instructor specifies the steps he performs and requires students to perform those steps with him from the beginning of the demonstration, students master the task quickly. Some instructors, however, waste time by talking about peripheral subjects such as the WORM formula, fail to specify the mental steps they perform, and require students to listen passively

during the demonstration. As a result, students often become confused and overwhelmed by the apparent difficulty of the task.

Even though most faults in teaching this task occur during the demonstration, the practice phase also presents problems for some instructors. Even after students learn the procedure, they often make minor mistakes in arithmetic or use the wrong scale. When they get the wrong answer, they tend to become frustrated and confused. If the instructor monitors their work closely, he can prevent them from using the wrong scale and identify arithmetic errors soon after they are made. Further, a high degree of instructor-student interaction will give the instructor many opportunities to reinforce the students' correct performance. Such positive reinforcement is especially important for tasks which seem difficult.

Several students can be tested on this task at once by writing their answers on a worksheet. If the worksheet shows the computations, the instructor can identify the source of any errors.

Determine Steel Cutting Charges

This task requires a combination of mental and physical manipulation when a procedure is being taught. It is also an example of a task where the answer varies with the conditions.

Students and instructors should have identical I-beam silhouettes for the demonstration. For the walk-through and practice phases, students should each have different silhouettes and exchange them each time they perform the task.

There is a tendency with this task for the instructor to digress into other areas regarding demolitions and for students to ask irrelevant questions. If this occurs, the critique should emphasize that the training objective determines the scope of instruction.

Many errors are made in this task, not because students do not understand it, but because of errors in arithmetic, measurement, or in using the chart. The important teaching point is that such tasks often appear more difficult than they are. In these cases it is especially important for an instructor to monitor student practice and give as much feedback as possible to assure students that they are using the correct procedure.

The performance test may be administered in a group. If a student gets an incorrect answer, the instructor should reconstruct the student's process with him.

Fold a Map for Extended Patrol

This task is relatively simple and for many classes of students it will not require a practice session. However, the instructor is responsible for measuring student progress accurately. Since it is a fairly easy task to teach, and since it reinforces the flexibility of the phases, this task is a good choice for the first presentation.

A key point which instructors often fail to stress is that the cuts must be made exactly along the line and exactly between the two outer folds. (This can be done better if it is done from the rear of the map.) During the performance test the instructor should check the cut on the map. If any tears or cuts extend beyond or fall short of the outer folds, the student should be scored NO-GO.

When demonstrating the task, it may be useful for the instructor to have a map folded with each square lettered in grease pencil in the manner shown in the FM. This technique has been an effective method to illustrate that any section of the correctly folded map can be referenced quickly.

Students can be tested in a group if they are separated.

Fold the US Flag

This task illustrates problems associated with training a team task. There are many similar tasks in a unit which two or more individuals may perform as a team, but each individual must know the entire tasks. These differ from crew tasks in which the individual always performs the same part of the function. Therefore each person should be trained and tested on the whole task.

A common instructor error with this task comes during testing. At the start of the test the instructor will often start out with the assistant instructor holding the blue edge of the flag. Properly, the instructor should hand the unfolded flag to the student, and the assistant instructor should take the end handed him by the student. Further, it is very important that the assistant instructor does not give the student any prompts.

An important teaching point relates to having the test situation approach the job situation as closely as possible. In this case, the time limit on the test will allow the student to refold the flag correctly if he errs initially. However, because the flag is usually folded in public, any initial error is cause for a NO-GO.

This task requires instructor observation during testing.

Give Dismounted Arm and Hand Signals

This task involves several separate but related subtasks. The instructor must present his information in a manner that will facilitate student retention. One method is to present the tasks in a logical situation such as is provided for in the performance test. The instructor must, however, insure that the students do not learn the signals in a set sequence since they will not be given in the same sequence on the job.

The management of the practice period usually determines the instructor's effectiveness with this task. One good approach has been to pair students so one can give a situation to elicit the signals from the other student. The instructor should observe each student during practice to be sure the signals are expansive enough to be seen at a distance.

It should be pointed out during the critique that the student, during training and testing, is taught to respond to verbal cues which are repeated as necessary. This does not differ substantially from actual on-the-job requirements where an incumbent will receive situational cues.

This task is suitable for group testing if students cannot observe each other.

Give Mounted Arm and Hand Signals

This task involves a number of separate but related subtasks. To facilitate learning, the instructor should place the students into a situation that would require the students to perform the signals. The students must be oriented to perform the task as they would from the turret of a tank.

Like the dismounted arm and hand signals, the practice period is crucial. If both tasks are used, it may be valuable to discuss the differences and similarities between the instructional strategy used for each task. Another topic for the critique may be the way the second instructor handles possible interferences between the two tasks.

This task is suitable for group testing, providing the students cannot observe each other.

Issue Tank Fire Commands

This has been one of the most difficult tasks for instructors. Usually the source of the difficulty has been that the instructor fails to identify the key points to be stressed. Rather than demonstrating a fire command for each situation describing the components of each command and then drilling students on similar situations, instructors tend to talk about the elements of the fire command. That approach requires students to remember a large mass of information, some of it conflicting with other fire command procedures they have learned, before they give any commands themselves.

For individual practice this task lends itself well to pairing students to drill each other. If that approach is chosen, the instructor must be sure that students showing the visuals give the "Up" and "Identified" responses to the command and that the other student waits for the responses before announcing "Fire." Because of possible interference with other commands, the instructor should monitor the drills closely to be sure that students do not confuse tank fire commands with those for a different weapons system.

The fire commands as outlined in the lesson plan are accurate and conform to FM 17-12. However, they are not the only commands that could be given in relation to the choice of weapon or ammunition to engage the target. If a student or observer is knowledgeable of M60A1 gunnery, the instructor must avoid getting into a detailed discussion with the student or class regarding the other options available.

This task requires individual verbal testing. Some instructors, possibly to save time, give the performance test as a written exercise. A written test is unacceptable for this task since it degrades the level of job simulation.

Measure Resistance with Multimeter

This is the only task in UTRAIN that requires equipment which may not be readily available in the quantities required. However, it is a good UTRAIN task because its apparent complexity is simplified by performance training principles. Soldiers can master the task quickly despite being unfamiliar with the equipment.

The task is composed of several easily discernible steps. Soldiers will have no problem performing any step; the problem is to remember all steps and the sequence for performing them. Therefore, although the task requires only one demonstration, it may require more than one walk-through and certainly requires active coaching during practice. To prevent students from making errors which might interfere with learning the sequence.

The unique characteristic of this task is that it introduces new nomenclature which is necessary to instruction on the task. The instructor should not teach nomenclature as a distinct phase of instruction. When he refers to various components during the demonstration and walk-through phases he should check to be sure students recognize the proper part from the name. However, the instructor must remember that the training objective does not require soldiers to recall nomenclature.

This task is suitable for group testing if students are arranged so they cannot observe each other. Students should measure resistance of a resistor which is new to them. Before the test, the instructor should be sure that each multimeter is offset from zero.

Perform Partial Manual of Arms With Riot Baton

This task must be mastered individually, but it is generally performed as part of a group. (Similar tasks are close order drill and physical training.) Therefore, part of the practice time should be devoted to group drill.

Because the riot baton is used in a formation, all students must hold the riot baton in the same hand, regardless of their dominant hand.

The most common instructor error with this task is demonstrating the positions while facing the students; i.e., not from students' viewpoint.

The instructor may test mastery of this task in three ways. The first is to segregate the tested student from the rest and the second is to place students so they cannot observe each other and issue the commands. Both of these test individual mastery of the task. Since this task will normally be performed in a formation, the instructor can place the students on line or in ranks to test them. All of these methods are acceptable, but the last is probably preferable because it approximates job conditions and allows the instructor to compare the briskness of soldiers' transition between positions. During critique the class should be made aware of the different methods of testing and the reasons thereof.

Prepare a Written Message on a Message Form

This task involves principles that must be learned and then applied to different situations. Since it is impossible to foresee all situations, the principles must be generalized to some extent. Therefore, the instructor should concentrate on the format rather

than the specific message.

During the pilot presentations of UTRAIN, the effectiveness of instruction on this task was determined by the type of training aids and instructor uses. The most effective approach was to use a large replica of a message form drawn on a flip chart or chalk board. During the demonstration the instructor filled out the replica with the same information students were using to complete their message forms. The instructor discussed implications of each format item as he came to it in the demonstration. If a walk-through phase is included, the replica can be left on display. But the replica and forms completed previously by the students should not be visible during the practice or test phases.

This task usually generates much "what if" discussion. The instructor will have to control questions closely and defer questions which are irrelevant to the training objective. For example, students should be told which time zone to use without a detailed discussion of time zones.

The prepared situations give only one way to prepare the body of the message. Other wording is acceptable if the meaning is not changed, and only authorized abbreviations are used.

This task is suitable for group testing, with the instructor evaluating the product.

Splice Field Wire with an Expedient Splice

Although this task requires more time to teach than the average, it is usually not difficult for the instructor. The key to success on this task is the quality of the demonstration. When an instructor demonstrates close to the students and demonstrates from the students' viewpoint, students usually master the wire splice within 25 minutes. Some instructors, however, stand away from the students and rely on verbal descriptions of the steps to carry the demonstration. Describing rather than showing how to make the splice makes this fairly straightforward task seem complicated.

Since most students learn the procedure from the demonstration, the instructor should be prepared to move directly into the individual practice phase. The instructor should emphasize the time requirements for this task during the practice period so students can sharpen their skill.

This task is suitable for group testing since the instructor can identify any errors from the appearance of the splice.

Tie Three Forms of the Bowline

This task appears initially difficult to demonstrate. Students will have difficulty unless the instructor insures that each step is performed with him by the students. It is imperative that the demonstration be done exactly from the students' viewpoint.

There is a tendency with this task to rely too much on the words "standing end" and "running end" as used in the FM and lesson plan. When students practice tying the knot, the name of the ends is usually irrelevant. If an instructor does talk about the ends, ask the students whether that information helped them, interfered with their practice, or made no difference. For most soldiers the "knot nomenclature" either has no effect or hinders their practice.

Students should be tested collectively, and the knots should be inspected by the instructor before going on to the next knot. It should be pointed out during critique that with this task students are taught to react to a situation rather than to a command to perform the task. Different situations which require the use of the three types of bowline can be developed.

Construct a Rappel Seat, Using Sling Rope

If this task is to give realistic practice, students should not know how to construct a rappel seat. In this case it is a good idea to ask which soldiers are not familiar with the task and to use those soldiers as students.

During the training, many instructors will tell students to tie a specific knot--square knot or an overhand knot. A point for the critique is that there are many times in the unit that a task being taught depends on the soldiers' already knowing a step in the task. An instructor cannot always assume that all soldiers know that step. In some cases the level of skill can be ascertained simply by asking who can do the step, but in other cases it may be better for the instructor to checkout soldiers' skill on the step before teaching the new task.

If the instructor in this task is experienced in rappelling (through Ranger School, airmobile training, or civilian pursuits) there is a strong tendency to include information that is important to rappelling, but irrelevant to this particular task. Again, the training objective determines what information should be given.

Common errors in this task involve moving the rope after it is centered on the hip before the overhand knot is tied, and placing the snaplink incorrectly.

This task can be tested in a group since the instructor can evaluate the product.

Transmit Location of Target Element of a Call For Fire

This has been the most difficult task for students in the pilot presentations. It is one of the rare tasks for which an instructor tends to give too little information. The reason for learning the task includes the role and location of the forward observer in a fire mission and explanation that the location of target element is not a complete fire command. Students need this information to distinguish this task from similar fire commands involving different methods of locating the target.

For UTRAIN this task should be restricted to situations with a horizontal shift less than 600 mils to preclude addressing trigonometric functions and sine factors. When the task is assigned as a practical exercise, the soldier must understand this limitation on the scope of his task. This is important, not only to limit the information but also to insure that the practice or test problems he prepares follow this restriction.

This method of target location does involve use of the WORM formula. The tendency, however, is to explain all aspects of the WORM formula which can waste time and confuse students. Since most officers are familiar with the WORM formula, the instructor should limit his discussion to a brief review as it applies to computing horizontal shift.

The most common mistake is organizing the instruction around the format of the element rather than around the job situation. The most effective approach has been to describe a specific situation, then give an appropriate command, and discuss the format for the location of the element as each part of the element is given. After this initial demonstration, students usually need only to be reminded of the order of the parts of the element to transmit the element themselves. The instructor should tell students which part of the element to give in the walk-through and, for the individual practice period, prompt them only as they forget the order of parts of the element or show confusion between the range and elevation parts. Smokeout questions are usually appropriate to reduce any confusion which arises between the range and elevation parts.

Transmitting a location of target element is a good example of a task which varies with the conditions. Therefore, the instructor should prepare enough situations for students to practice and be tested on a variety of situations. Further, since an important

aspect of mastery is to be able to recognize which parts of the element are required by a specific situation, the practice and test situations must contain a variety of conditions.

Students should be tested individually. They should be given time to prepare the call for fire and then be required to present the call orally.

Annex I

SCENARIOS FOR VIDEOTAPES

I. Videotape Demonstration of Performance Training

(For Section III)

LENSATIC COMPASS SCENARIO

Note to the videotape production team

Tape a Platoon Leader (PL) delivering the below lecture and demonstration to four soldiers in the field. Whenever something is being demonstrated in these three scenarios, it must be from the soldier's point of view, i.e., so they can see it as it appears on their equipment. Occasionally cut to the four soldiers showing their confusion and fumbling with their compasses. The soldiers should show extreme dismay at the end. This is intended to be an example of reasonable but poor military instruction.

Platoon Leader's instruction guide

(Note: The PL demonstrates the actions and points out the various parts as he discusses them.)

Okay men, you know we're going to the field next week and the old man wants to be sure everything goes right. We have five minutes before chow, so I'm going to explain the lensatic compass to you. When you have learned about the compass, you will have no excuse to ever get lost.

The magnetic compass is the most commonly used and simplest instrument for measuring directional angles in the field. Its most important features are a floating dial indicator and a sighting device. Two varieties of magnetic compasses are standard for military use today, the lensatic compass and the artillery (M2) compass. Since the latter is a special purpose compass, it will not be discussed today. The name lensatic compass is derived from the magnifying lens which is mounted in the eyepiece. The case is aluminum and the dial capsule is incased in a silicone rubber cap that automatically seals itself when it is assembled into the compass case. The compass case is about two inches long and less than one inch thick when closed. This compass has a four and three-quarter inch straightedge in the form of a graduated scale permanently attached with the straightedge parallel to the line of sight. Half of this scale is cast with the case and half with the cover, which are connected with a hinge. Open, it is seen to be graduated in 100-meter units at a 1:25,000 scale. The dial of the compass is marked in 5-degree and 20-mil graduations. Magnetic azimuths can be sighted through the lens and sighting wire and read accurately to within two degrees. Closing the compass automatically

lifts the magnet and dial assembly off the pivot, thus protecting the parts from wear when the compass is not in use. Cardinal points and markings on the bezel crystal are luminous for reading in darkness. The North-seeking end of the magnetic needle is also luminous. A luminous area in the damping shell further aids in reading in the dark. The lensatic compass is suitable for military units for reconnoitering, determining direction, orienting maps, fire control, and other uses where magnetic azimuths are required.

When sighting with the lensatic compass, it should be noted that the compass is held level and firm. The slit in the eyepiece and the hairline front sight in the cover are aligned with the target. The azimuth can then be read directly by glancing down at the dial through the eyepiece. For example, if the desired azimuth is 45 degrees, I simply rotate my body East of North until 45 is under the black index line (rotates body), sight an object, for example that _____, walk to it, and repeat the process until I get to the destination. The numbers on the transparent dial are in black and the dial is graduated in mils as well as in degrees.

For night use, special features of the compass are luminous markings and the 3-degree bezel serration and clicking device. Turning the bezel produces clicks, each of which represents three degrees. The bezel stop and spring will hold the bezel ring in any desired position. The short luminous 45-degree line of the bezel glass is used primarily to facilitate the long luminous indicator to any predetermined magnetic azimuth in the dark. For example, if you want to set a magnetic azimuth of 45 degrees, set the short line on the 90 degree luminous dot. Then if you want to set an azimuth of 42 degrees, just turn the bezel glass one click counter-clockwise.

Gentlemen, I have told you every important characteristic of the lensatic compass. When we go to the field next week, I don't want to hear that any of you got lost. Break for chow.

M203 GRENADE LAUNCHER SCENARIO

Note to videotape production team

Tape a platoon leader (PL) instructing four soldiers (Ss) in field disassembly and assembly of the grenade launcher. Show the PL from Ss' point of view when he is demonstrating a step. Show Ss from side view or PL's point of view when they perform steps. During walk-through phase show side view of Ss with close-ups of Ss who have problems. This tape is intended to show an acceptable demonstration with a poorly organized practice period, inadequate coaching, and no performance testing.

Platoon Leader's instruction guide

Gentlemen, after we finish this instruction you will be able to field disassemble and assemble the M203 grenade launcher, either after firing or for normal daily maintenance, within 2 minutes. You will learn the procedure for both conditions. The ability to disassemble the grenade launcher is vital to servicing the weapon.

The first procedure is disassembling and assembling the weapon after firing. This should be done as soon after firing as practical to remove deposits and fouling.

During the demonstration watch me perform each step, then you perform it. The first step is to clear the weapon. Depress the barrel latch (shows latch) with your right thumb and slide the barrel forward with your left hand (slides barrel forward). Now, slide the barrel forward. (Ss comply.) Now, check to insure there is no round in the breech. (PL and Ss look into breech.)

The second step is to remove the quadrant sight assembly. Loosen the mounting screw (shows Ss' location of screw and begins loosening screw-- Ss also loosen screw). Now, just lift the quadrant off. (PL, then Ss, remove quadrant).

The last step in field disassembly after firing is to remove the barrel. Slide the barrel forward (PL depresses latch and slides assembly forward-- Ss follow). Now, from the rifle muzzle, count back to the fourth hole on the left side of the handguard. (PL shows hole -- Ss count.) Next, just insert the cleaning rod, depress the barrel stop, and slide the barrel off the receiver track. (PL then Ss remove barrel.)

That completes the field disassembly after firing. Put the barrel assembly back on the receiver. Just slide the assembly onto the receiver until the barrel stop engages. (PL, then Ss, attach barrel assembly.)

You remove the barrel assembly for daily maintenance differently than you do after firing. First, remove the handguard and sight assembly. Push down on the slip ring (PL shows ring) and pull down and out on the assembly. (Ss remove handguard and sight assembly.) Now, open the breech. Remember to depress the barrel latch. (PL and Ss open breech.) The barrel stop is not exposed. (Shows barrel stop.) Press down on the stop and slide the barrel off the receiver track. (PL, then Ss, remove barrel.)

That completes field disassembly for normal maintenance. Now, we will assemble the launcher. Assembly is done in reverse order of disassembly. First, slide the barrel assembly onto the receiver until the barrel stop engages. (PL, then Ss, attach barrel assembly.) Put the handguard and sight assembly on the launcher. (Ss watch, then comply.) Now, install the quadrant sight bracket assembly and clamp to the handle of the rifle. (PL installs assembly and clamp, then observes Ss install them.) Finally, tighten the mounting screw.

Now, I will walk you through disassembly and assembly of the grenade launcher. I will tell you when to perform each step. We will first disassemble the launcher after firing. Clear the weapon. (One S does not depress barrel latch.) (Name), I told you to depress the barrel latch. (S fumbles for latch, presses it, and opens breech.) The reason you look into the breech is to be sure there is not a grenade loaded in the weapon.

All right, next take off the quadrant sight assembly. (Ss comply.)

Now, take off the barrel. Depress the barrel stop. (One S tries to depress the barrel stop through the fourth bottom hole. PL takes cleaning rod from him, inserts it in the correct hole, removes barrel and hands barrel and weapon back to S. Other Ss remove barrel with no problem.)

OK, put the barrel back on. (Ss comply.) Now, we will disassemble the launcher for normal daily maintenance. First, remove the handguard and sight assembly. (One S cannot disengage the assembly. PL looks at his watch and at others who have finished the step.) Come on, (Name), hurry up. (S finally pulls down and out and removes assembly.)

Next, take the barrel off. Remember, you must open the breech. (Ss open breech, depress barrel stop, and slide barrel off receiver track.)

We will now assemble the grenade launcher. Install the barrel. (Ss comply.) Now, put the handguard and sight assembly on. (Ss comply.) Next, install the quadrant. Don't forget to tighten the screw. (Ss install quadrant.)

OK, let's go through it again for after firing disassembly. First, clear the weapon. (Ss comply, but one S is slower than the others.) Remove the quadrant sight assembly. (Ss comply. One S starts to remove barrel.) Hold on, (Name), wait for the rest of us. Now, everyone remove the barrel. (One S tries to depress barrel stop through the wrong hole. PL and other Ss wait until he finds the right hole. Delay should be long enough to be uncomfortable.)

All right, put the barrel back on. (S who had the problem with removing barrel flustered, but complies; other Ss have no problem.) Next, we will disassemble for daily maintenance. Remove the handguard and sight assembly. (Ss comply but one S is slower than others.) Now, open the breech and remove the barrel. (Ss comply but one S watches before depressing barrel stop.)

Now, install the barrel. (Ss comply.) Put the handguard and sight assembly on. (Ss comply.) Finally, install the quadrant sight assembly. (Ss comply but one S does not tighten the clamp. PL asks another S to tighten the clamp.)

OK, (Name), when do you take off the handguard and sight assembly?

"Normal maintenance?"

Right. Name (another S), which hole do you stick the rod through to remove the barrel after firing? (S points to fourth hole.) Is that right (to S who had problem)? "Yes, Sir."

Good. (To last S), what is the first step in disassembling the grenade launcher? "Clearing the weapon."

Very good. Tomorrow, you will learn to zero the grenade launcher. Turn in your weapons to the armorer.

M60 MACHINEGUN SCENARIO

Note to videotape production team

Tape a platoon leader (PL) instructing 4 soldiers (Ss) in putting the M60 machinegun into operation. Show the PL from Ss' point of view when he is demonstrating a step. Show Ss from side view or PL's point of view when they perform steps. During walk-through and practice phases show side view of Ss with close-ups of Ss who have problems. This tape is intended to show good performance training that includes individually paced practice, frequent appropriate coaching -- especially positive reinforcement, and relevant performance testing.

Platoon Leader's instruction guide

Men, today you will learn to put the M60 machinegun into operation. You will be able to perform the 6 steps in the procedure within 15 seconds. I will demonstrate each step in the procedure. After I demonstrate a step, you will perform that step.

The first step is to put the safety on the fire position. The safety is here. (PL turns weapon so safety is visible to Ss.) To put the safety on fire, just turn the lever from S to F. (PL puts safety on fire, Ss follow.)

The second step is to cock the weapon. Grasp the cocking handle palm up, pull it to the rear, then return the handle to the forward position. Like this. (PL, then Ss, cock weapon.) Good. Some M60s are harder to cock than others. Be prepared to pull hard.

The third step is to put the safety on safe. (PL turns machinegun so Ss can see safety.) Turn the lever from F to S. (PL, then Ss, put safety on safe.) Be sure you remember this step on the job and on the test. Otherwise, the machinegun might discharge before you are ready.

The fourth step is to load the weapon. Watch while I demonstrate: (a) open the feedcover by releasing the cover latch and lifting the cover; (b) place the dummy ammunition, double looped end first (shows double looped end), into the cartridge feed tray, insuring that the first round is centered in the feed tray groove (tilts weapon so Ss can see round); and (c) hold the ammunition in place and close the cover. Now, practice loading a few times. (Ss begin loading while PL moves among them. PL should reinforce correct performance of each part of the step by saying -- right, good, that's it. One S starts to close cover without holding ammunition.) Be sure you hold the ammunition when you close the cover, or the belt can slip on you. (Ss practice loading several times.)

The fifth step is to set the sights. (Turns weapon so Ss can see the sight leaf.) The rear sight scale is marked in 100-meter units from 3 to 11. To set your sights at 500 meters, press the slide release and move the slide to 5. Now, set your sights at 500. (Ss comply. PL checks each weapon, reinforcing each correct setting.) Now, set your sights at 750. (One S is slower than others.) Move the slide halfway between 7 and 8. Good. (PL checks others then returns to his weapon.)

The sixth step is to fire the weapon. Put the safety on fire, hold the weapon with your right hand on the pistol grip and your left hand on the feedcover and pull the trigger. (PL fires his weapon.) Now, fire your weapon. Good.

Clear your weapon and put the safety on safe and I will walk you through the procedure.

Put the safety on fire. (Ss comply.)

Cock the machinegun. (Ss comply.)

Put the safety on safe. (Ss comply.)

Load the weapon. (Name), is there anything important to remember about loading? "Hold the ammunition when you close the cover." Right. (Ss load.)

Set the sight scale for 700. (Ss comply, PL checks setting.)

Now, put the safety on fire and fire the machinegun. (Ss comply.)
Very good.

Now that you can do the 6 steps, practice them until you can put the machinegun into operation in 15 seconds. Tell me when you are ready to be tested.

(Ss begin practicing while PL observes and reinforces correct performance. After one S puts the safety on safe after cocking the machinegun, PL asks, "Why is it important to put the safety on S?" S -- "So it doesn't fire while I'm loading or setting the sight." PL, "Good.")

(When one S is ready to be tested, PL tests him while other Ss continue practicing.)

Put the machinegun into operation to engage a target at 850 meters. You have 15 seconds. Any questions? Begin.

(PL observes S.)

(If S is right.) You are a GO. Give (another S) a hand.

(If S is wrong.) You are a NO GO. You forgot to _____.

Annex I

SCENARIOS FOR VIDEOTAPES

II. Videotape Demonstration of Training to Review Performance Training Process

(For Section VII)

PRACTICE IN PERFORMANCE TESTING

INSTRUCTION (.45 AUTOMATIC)

Note to the videotape production team

Tape a Platoon Leader (PL) and 5 students (Ss) as they proceed through the below four phases: (1) demonstration, (2) walk-through, (3) practice, and (4) performance test. The entire tape must not be longer than 15 minutes. Show the PL when the Ss should be observing him and the Ss as they perform. During the demonstration the PL will perform each step as he mentions it. Ss will perform each step after the PL demonstrates it.

Platoon Leader's instruction guide

Gentlemen, this is a pistol, automatic, cal .45, M1911A1. It is a semi-automatic, recoil-operated, magazine-fed hand weapon.

The training objective for this instruction is that you will be able to general disassemble and assemble the cal .45 automatic pistol in 4 minutes. The ability to disassemble and assemble the pistol is necessary for you to clean and inspect it.

If you have to apply force, be careful not to damage any of the parts. As you disassemble the pistol, lay out the parts in the order of their removal. This procedure will help you assemble the weapon, which is done in the reverse order of disassembly.

If you have a question at any time, feel free to ask it. I will show you how to do each step. After I demonstrate a step, you do it.

The first step is to clear the weapon. Press the magazine catch and slip the magazine out. Now pull the slide to the rear and inspect the chamber to see that the weapon is clear.

The first part of the weapon to be removed is the recoil spring plug. First, put the safety on SAFE. Now press down on the recoil spring plug with your thumb, and then turn the barrel bushing $\frac{1}{4}$ turn clockwise with your left hand. Allow the recoil spring to expand slowly.

Be careful or the spring will fly out and injure you or you will lose the part. Turn the recoil spring plug counterclockwise and remove it from the recoil spring.

Next we will remove the slide stop. Release the safety. Push the slide stop to the rear until the disassembly notch is aligned with the rear projection on the slide stop. Like this (show alignment). On the other side of the weapon is the protruding end of the slide stop pin. Push in on the tip and pull out the slide stop.

Now we will remove the receiver group. Turn the pistol over and pull the receiver to the rear, off the slide.

To remove the recoil spring guide and recoil spring, lay the slide on its sights and pull the recoil spring guide and recoil spring out the back of the slide. Twist the recoil spring guide off the spring.

Now turn the barrel bushing counterclockwise, and pull it from the slide.

Finally, remove the barrel. Push the barrel link forward, and remove the barrel from the front end of the slide.

This completes the general disassembly. To assemble the pistol, we will replace the parts in reverse order of disassembly.

To replace the barrel, stand the slide on its sights, and slip the barrel, chamber end first, into the front end of the slide. Be sure the link is down.

Next, replace the barrel bushing. Place the barrel bushing on the muzzle end of the barrel, push it into the slide, and turn it $\frac{1}{2}$ turn clockwise.

To replace the recoil spring guide and recoil spring, insert the recoil spring guide into the tightest end of the recoil spring. Be sure it is the tightest end. Slip the open end of the spring into the slide from the rear. Be sure that the concave cut on the recoil spring guide collar is seated on the barrel. Push the barrel, recoil spring, and recoil spring guide fully forward in the slide.

To rejoin the receiver group to the slide group, hold the slide with the sights down in the palm of one hand. Turn the receiver over and put the guide rails of the receiver in the grooves of the slide. Push the receiver all the way forward on the slide with a quick motion.

Now turn the pistol over and replace the slide stop. Hold the pistol with its left side toward you. Look through the slide stop pin hole in the receiver for alignment of this hole with the hole in the barrel link. If the holes are not aligned, move the muzzle end of the barrel forward or backward to align them. Insert the slide stop pin through the hole. If anything goes wrong in assembling the pistol it will

probably be because the hole is not aligned with the barrel links. Be sure you do this step right. Move the slide forward until the disassembly notch is over the square hole in the left side of the receiver. Press the slide stop up and in to seat it.

Now replace the recoil spring plug. Push the slide fully forward, and put the safety on SAFE. Place the recoil spring plug on the recoil spring. Turn the recoil spring clockwise to lock the plug to the recoil spring. Holding the pistol with the muzzle up, push downward on the recoil spring plug until the plug is inside the slide. Hold the plug firmly and turn the barrel bushing counterclockwise to lock the recoil spring plug in place. Press the safety lock downward to the FIRE position and squeeze the trigger.

Insert the magazine into the magazine recess until it is fully seated and held by the magazine catch. This completes the general assembly. Do you have any questions?

S -- Sir, which part is the firing pin?

PL -- The firing pin is in the receiver group.

S -- Well, how do you get to it?

PL -- You don't need to get to it. That's part of detailed disassembly and it's usually done by the armorer. If you ever do it, you'll have close supervision. Any other questions?

S (another) -- Yes sir. What makes the slide come back after the gun's fired?

PL -- When a round is fired in the chamber, gases expand and put pressure on the back of the chamber. That's what causes the recoil. The pressure on the back of the chamber forces the slide back. Then, when the slide returns to the front, it strips the top round from the magazine.

Now we will walk through the disassembly and assembly procedures. I will tell you when to perform each step. If you have any problem I will help you. What do you do first?

S -- Clear the weapon.

PL -- Very good -- go ahead -- clear the pistol.

(Ss remove magazine and check chamber.)

Now remove the recoil spring plug. Be careful that the spring doesn't fly out.

(One S presses down on the plug without putting the safety on SAFE.)

PL -- You forgot to put the safety on. Be careful -- good.

Next, remove the slide stop.

(Ss release safety, align notches, push on slide stop pin and pull out slide stop.)

PL -- Excellent!

Now remove the receiver group. Just pull the handle off the slide.

(Ss comply.)

PL -- Good!

(One S puts receiver on table out of order.)

PL -- Why did you set the part there?

S -- (shrugs) I don't know.

PL -- Remember, you're supposed to put the parts on the table in the order you take them off. Why do we do that (to another student)?

S -- Because you put it together the way you take it apart. I mean opposite to the way you take it apart.

PL -- Very good (to 1st S). Lay out the parts in the order you remove them.

Remove the spring and spring guide, then separate them.

(Ss comply.)

PL -- That's right.

Next, take off the barrel bushing.

(One S tries to pull bushing off without turning it.)

PL -- Turn it counterclockwise -- good!

Finally, remove the barrel.

(Ss push barrel link forward and remove barrel from front end of slide.)

That completes the general disassembly. Now, we will assemble the pistol. Remember, assemble the pistol in reverse order of disassembly.

Replace the barrel and barrel bushing.

(One S does not push the barrel link toward the front. PL watches but says nothing.)

OK. Next, reconnect the receiver group. (Name), why should you turn the receiver group over?

S -- To keep the doodad here (indicates link) from dropping.

PL -- Right, good!

Now, replace the slide stop.

(Ss check alignment of hole with link.)

(One S has trouble aligning notch with square hole.)

PL -- Try holding the slide with your thumbs on the back. Here (takes pistol), like this (aligns holes). (To other Ss), Now push the slide stop up and in (pushes stop in and hands pistol back).

Next, replace the recoil spring plug. Be very careful when you push the spring inside the slide.

(Ss comply.)

PL -- Good!

Now, check operation of the pistol.

(If all pistols are operational, "Very good." If any are not operational, disassemble pistol to point of error and return pistol to S for reassembly.)

You men are now ready for individual practice. Remember, you must be able to disassemble and assemble the pistol in 4 minutes. If you have any problems, let me know. Tell me when you are ready to be tested.

(During practice PL circulates among Ss watching performance, giving help as needed, and consistently giving positive feedback.)

(PL will administer performance test to first S who says he is ready.)

During this test you must general disassemble and assemble the cal .45 so that it passes the operational checks. You have 4 minutes. Do you have any questions?

S -- No sir.

Begin.

(S disassembles and assembles weapon within 4 minutes.)

PL -- You are a GO.